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#228 | 01-2025

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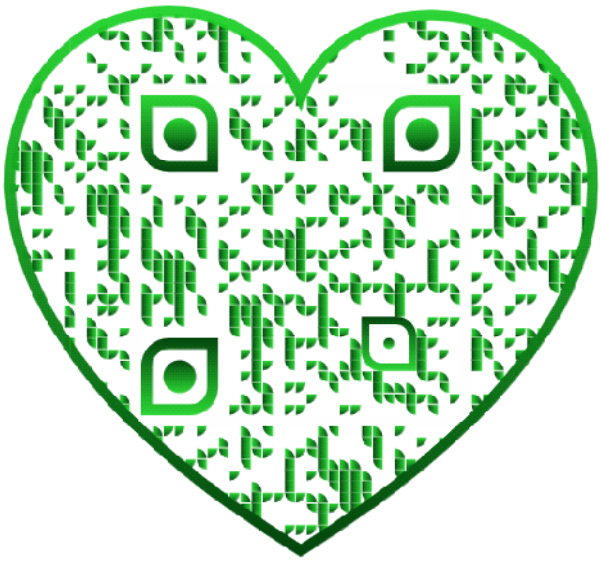

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SOFTWARE HIGHLIGHTS

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2 Sound instruments by AAS

One software highlight, twice the fun: this month, our friends at Applied Acoustic Systems are giving you two great sound instruments. Whether you're into vintage synth sounds, cutting-edge club sounds or experimental soundscapes, you can choose your two favorites from a total of 76 packs. Whatever genre or style you prefer, you are guaranteed to find the right inspiration for your musical projects here!

Download: see page 9 | Info: reasonstudios.com win | mac

Modular DAW with SSL Console
Reason 13 + VST3 Rack

A full-blown DAW for three months for free! Earlier, Reason was known specifically for its rack look with cable clips, but the app has long since advanced to a full-blown DAW that even has a SSL console ahead of Cubase and Pro Tools. And if you don't want to switch your sequencer, you can use Reason as a VST3 plug-in with over 15 synths, 29 rack effects, arpeggiator, sequencer, LFOs and many other tools, all of which can be combined in any way you like. Awesome!

Download: see page 9 | Info: reasonstudios.com win | mac

All serial numbers safely accessible:
The Beat Serial Center

To ensure that none of your serial numbers are lost in the future (for instance, in the event of a new installation, Outlook crash or disk crash), you can now conveniently manage them online. The advantages are obvious: The editorial team can send you targeted software updates, you have access to all serials at any time and from anywhere, and everything is managed and stored in a central location. The Serial Center thus becomes your personal password archive on the web.
www.serialcenter.de

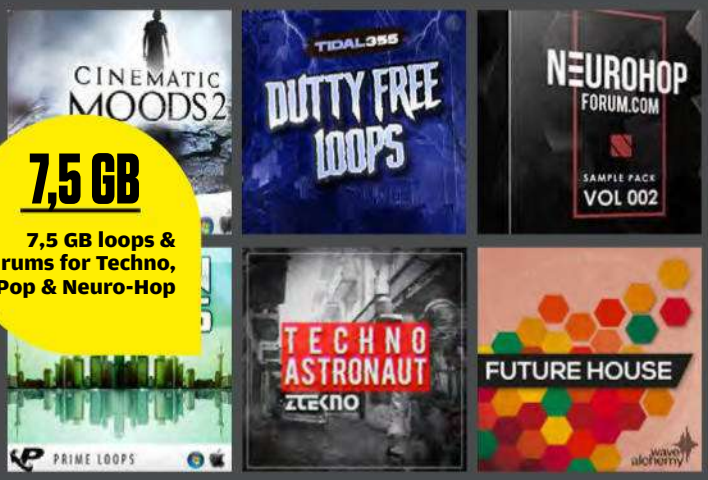
98 Shamanic Pads, Bells & Wooden Drums
Revenge Of The Maya Gods

Take part in our sonic ritual and experience the mystical sound of a long gone ancient era. Revenge Of The Maya Gods brings you 98 enchanting pads, glossy bells, wooden drums and traditional shamanic instruments, that create an instant feel of dark and misty vibe, layered with authentic flair of tropical rainforest and occult magic. It's about time to replace your average synths and drums with true ambience – works for any genre.

Download: see page 9 | More packs: zamplersounds.com win | mac

Beat #228 – Exclusive software

More than 16 GB of valuable plug-ins and samples to download



7,5 GB

7,5 GB loops & drums for Techno, Pop & Neuro-Hop

From club sounds to vintage sounds, the AAS instrument packs offer a wide range of sounds. Choose from 76 unique packs and get two instruments as a full version for free. The complete professional DAW Reason 13 + VST3 Rack with 15 synths and 29 rack effects is also included.

Our "Revenge Of The Maya Gods" expansion set for our Zampler and Akai MPCs offers thrilling textures. Almost 100 mystical pads & shimmering bells, powerful percussion and traditional instruments are waiting to be tried out.

With our impressive 7.5 GB sound pack, you'll find a huge selection of powerful sounds that have been specially developed for producers of future house and techno. Featuring exclusive contributions from top providers such as ZTEKNO, Prime Loops and W.A. Production, you'll have the perfect foundation for exciting tracks and innovative sounds. The cinematic sounds and fascinating percussions will also add depth and character to your music.

Contents compiled by the Beat editorial team

AudioStellar AI Sampler

AudioStellar is a free "AI powered experimental sampler". It allows you to explore your sample library by creating your own constellations with thousands of sounds. Play creatively, interact with the generated sample map and connect soft and hardware synths.

Download: see page 9 | Info: audiostellar.xyz win | mac | linux

Outobugi Bundle

The Outobugi bundle offers a wealth of sophisticated and creative effects for mixing and sound design. From the multiband upward/downward compressor Dynastia to the stereo spread tool Extend and the drum processor Refire, which also shapes transients and gives kicks more depth, the bundle offers a lot.

Download: see page 9 | Info: outobugi.com win

Exclusive download:

The Beat Studio

3,33 GB

Revenge Of The Maya Gods for Zampler & Akai MPCs

Apsonic Speedrum BE

Powerful drum sampler with 16 MPC-style pads

Acon Dynamics BE

All-rounder with Compressor, Expander and Gate

Thorn Solo

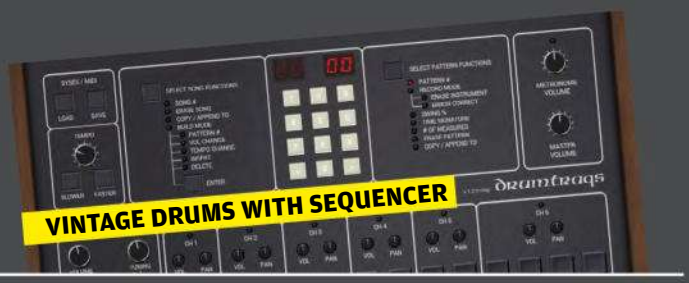
Brute monosynth with all the finesse

Zampler//RX

REX and SFZ player with mod Matrix & Parameter Sequencer

Halls Of Fame 3 Beat

Luxury convolution reverb with Lexicon, Bricasti & EMT



Full Bucket Music DrumTraqs

The legendary drum machine DrumTraks from 1984 by Sequential Circuits is back - at least as a plug-in. DrumTraqs offers 13 drum sounds that you can mix on six channels and a sequencer.

Download: see page 9 | Info: fullbucket.de win

Analog Obsession ReLife

With ReLife, you can breathe new life into your songs. In addition to a shaping section, there is also a dynamic EQ on board.

Download: see page 9 | Info: analogobsession.com win | mac

Giada - Hardcore Loop Machine

Giada is a minimalist open source tool that works as a loop machine with sampler and effects processor. Designed for DJs, live performers and electronic musicians. Build your performance in real time by layering audio tracks or MIDI events.

Download: see page 9 | Info: giadamusic.com win | mac | linux

Neutone Morpho

Transform your sounds into unique sound textures in real time with Neutone Morpho. Input sounds are resynthesized into a completely different style that can be played like entirely new instruments.

Download: see page 9 | Info: neutone.ai win | mac

Boost your production success

Learn producing, mixing and mastering at Germany's most popular online academy in audio engineering: HOFA-College.

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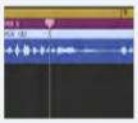

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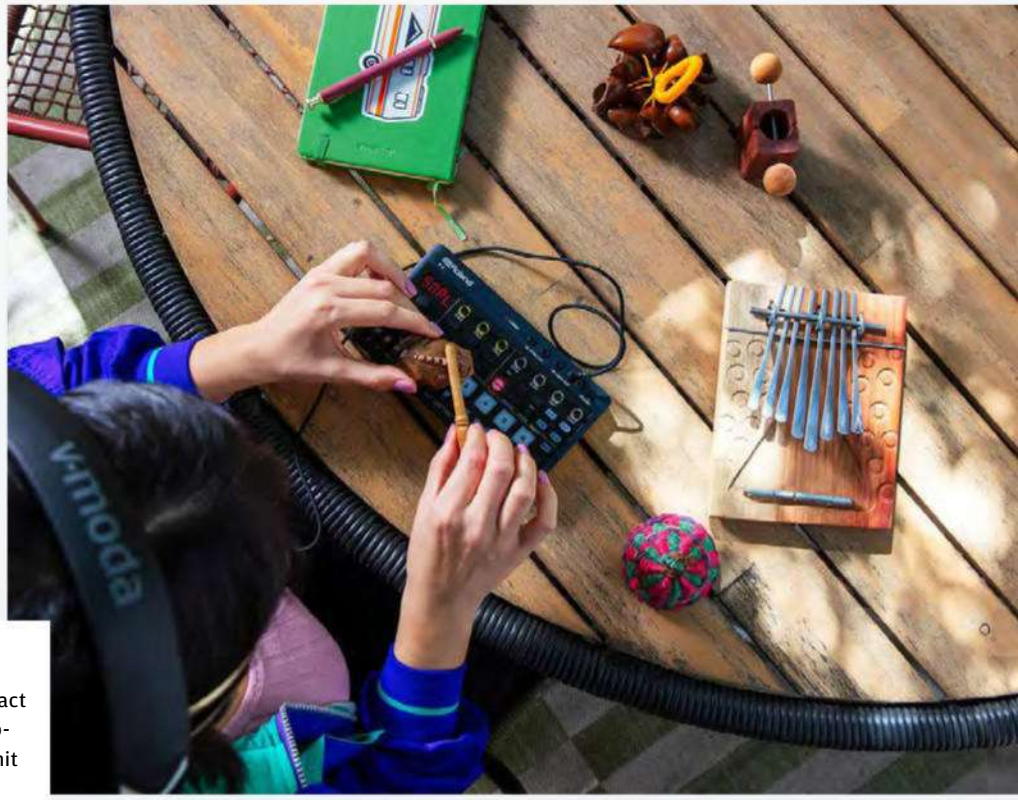

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The common thread: Beat issue 01/2025

For many years, Beat has been inspiring its readers not only with practical and musical topics, but above all with the tight integration of editorial content. From the very beginning, Beat has been about creating, about the structured building of ideas and the common thread – in the magazine as well as in the tracks. This navigator shows you the highlights of this issue andallows you to see the big picture.

Special: Studio monitors

Honest sound or whitewashing, reference monitor or blender? In the special you will learn everything about the properties, from neutrality to near and midfield monitors to active and passive options. We will examine areas of application in music production and film and give tips on the optimal product selection and placement. Perfect for anyone who wants professional mixes! Plus a market check on all current active devices including suitable headphones. **Page 16**

Test: Roland AIRA Compact P-6

Roland is expanding its AIRA Compact series. After two synthesizers, a groove box and a voice box, the P-6 is a creative sampler with surprisingly extensive functions. **Page 66**

Zampler & MPC Expansion: Revenge Of The Maya Gods

Ready for a mysterious trip into the world of the Maya? Our latest soundbank unleashes shamanic Pads, shimmering Bells and powerful Wood Drums, accompanied by rainforest Atmospheres. Get inspired and create a captivating Ambient Electro Track with us in the style of Tycho, Sundial Aeon and Carbon Based Lifeforms! **Page 60**

Discovered: Victoria

For Victoria de Angelis, deejaying is not just another trophy to add to her collection. It is not only the fresh and fascinating form of creativity which allows her to express her artistic personality. Her DJ sets, both solo or in collaboration with established turntable wizards like Partiboi69, demonstrate how naturally she has transitioned to the turntables. Deejaying allows her not just to discover – but to actually surprise and re-invent - herself every single night. **Page 38**

Digital Culture: Back Catalogue

Classics, oldies and legends are worth their weight in gold for the music industry. But the hits and stars of the present are even more valuable. And so rights holders are now barricading the vaults to their back catalogue ever more tightly. How far are they prepared to go? **Page 42**

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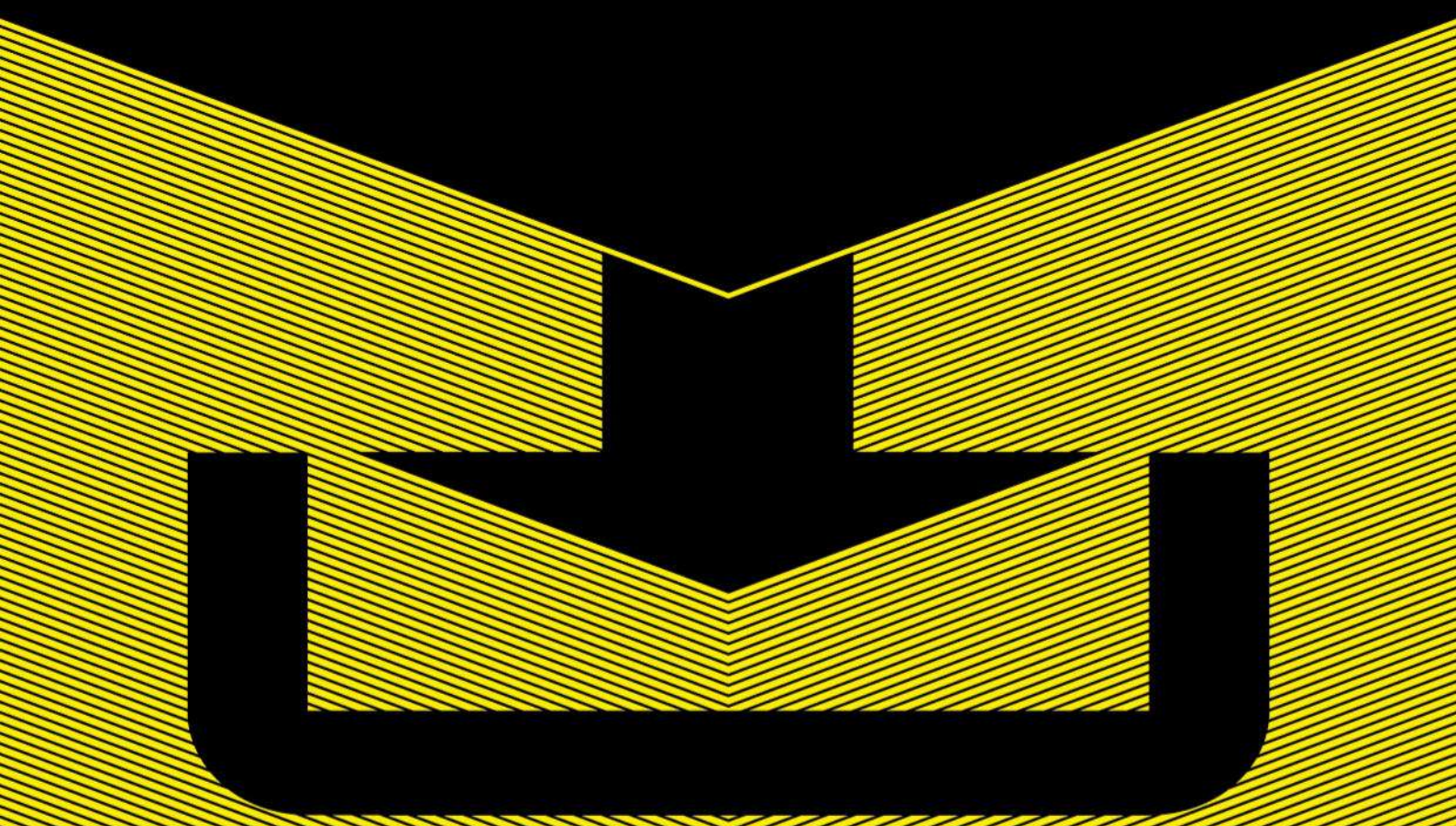

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Facts | Opinions | News | Products

Magazine

by Carl-Philipp Schmeller

Create your own instruments with Soundbox

Soundbox is a versatile MPE sampler from Audiomodern that allows you to create your own innovative virtual instruments. With a variety of integrated functions, you can create customized instruments according to your ideas. Modular effects, a flexible vector engine and various modulation modules are available to help you with this. You can even share the finished instruments with other users. The combination of features makes Soundbox a universal tool that opens up limitless creative possibilities. Soundbox also aims to stand out with its intuitive navigation and advanced mapping editor. This gives you a user-friendly browsing experience with genre and style tags for quick access to your sounds. The advanced audio and mapping editor offers multiple velocity layers, flexible group options and many other powerful features. Soundbox also includes the tools Cosmo, Kromium and Voxmotive in the bundle version.

Last paragraph new: Soundbox is now available for just 29 Euros (intro price), the bundle price is 79 Euros. And brand new is the free Soundbox Player.

audiomodern.com

More info

Soviet synthesizer with 350 presets

Cherry Audio is known for its emulations of legendary synthesizers. With the latest plug-in Atomika, they deliver a faithful replica of the once duophonic, Soviet analog synthesizer Povlika from the 80s with a realistic 3D user interface. Atomika's polyphony has been increased to 16 voices, and unison oscillator stacking and an expanded LFO with more waveforms and comprehensive performance controls have also been added. These improvements not only benefit the essence of the original, but also bring modern conveniences. The sound generation is based on two VCOs. Other features include a flexible arpeggiator, as well as four effects (Phasor, Flange/Chorus, Echo and Reverb). The iconic, raw sound of the Polivoks filter has been carried over from the original, but with additional filter modes such as High Pass, Notch and Peak and new controls such as Starve, Filter Drive and Amp Drive. 350 carefully selected presets are included ex works.

Atomika is now available for 49 US Dollars. The sound generator supports AU, VST, VST3 and AAX formats.

cherryaudio.com

More info

Audio interface for fast headphone mixes from Black Lion Audio plus DAW

Framed by a 19-inch rack unit, Black Lion Audio presents its new flagship audio interface Revolution 14x16. It features four XLR TRS sockets, of which channels 1 and 2 are each equipped with an auteur preamplifier. These can process both microphone and instrument levels. There are also send and return connections on the rear and four additional analog outputs for connecting with any routing of the signal. On the digital level, there are ten additional inputs and outputs for the interface with S/PDIF and ADAT. Three headphone outputs with separate volume controls are also available. The "Mix Edit" function makes it possible to quickly create a headphone mix with minimal latency from the hardware inputs and the software playback. Eight-stage metering is available for visual monitoring, displaying either the input or output levels or monitoring the levels of the rear channel inserts. A comprehensive software package with the DAW Studio One+ from PreSonus is included.

Revolution 14x16 will be available from specialist retailers from the end of November at a price of 1649 Euros.

audiowerk.eu

More info

24 track standalone recorder with audio interface from Tascam

The new Studio Bridge multitrack recorder from Tascam, which also acts as a USB audio interface, is a bridge between analog mixing and digital recording. You can feed up to 24 tracks for line signals from an analog mixing console into the Studio Bridge mobile recorder and record them. Three in-house Sub-D connections are used for this purpose. The signals are recorded in WAV/BWF format with up to 24 bit and 48 kHz resolution directly onto SD cards with a maximum storage capacity of 512 GB. A computer with DAW is not even necessary for this and the desktop device is also suitable for live applications. Another recording highlight is the punch function, which allows you to record up to ten tracks simultaneously. In addition to the USB-MIDI interface, MIDI inputs and outputs are also available for easy integration of drum machines, sequencers, synthesizers and controllers, for example. The monitoring path can be assigned to each channel. A controllable headphone output is also available.

Studio Bridge can now be pre-ordered from specialist retailers at a price of 999 Euros.

More info

tascam.eu

4 oscillators in a compact VA synthesizer

Even though multi/poly is a newly developed compact VA synthesizer from Korg, certain associations with the company's own synth legend Mono/Poly from the 80s with its blue design cannot be denied. In contrast to the hardware original, the desktop synth can be played polyphonically with 60 voices. In addition, the sound generation of the multi/poly is based on four oscillators, which can use both analog waveforms and wavetables. As a third option, the oscillators can also use waveshapers in the style of West Coast synthesis. If that's not enough, you can also load in your own wavetables. The filter uses the dual filter with legendary filter models such as Mono/Poly, MS-20, Mini or Pro. Other features include four DAHDSR envelopes, five LFOs and six modulation processors. There are also three effect blocks with multi-effects plus master reverb and equalizer. The flexibility of the sound should also be emphasized thanks to features such as Kaoss Physics and Motion Sequencing 2.0.

The multi/poly is available immediately at a price of 949 Euros.

More info

korg.com

Cubase 14 is here – Now with more groove and modulation

Steinberg has modernized its DAW flagship Cubase to version 14. One of the most important new features are the modulators (only in the Pro version), which are designed to bring more movement and liveliness to the music. The modulators include LFO, Envelope Follower, Shaper, Macro Knob, Step Modulator and Mod Scripter. Another new feature is the pattern editor, which is designed to give your beats more groove. With Beats ex machina, the heart of the new drum track is a generator for drum sounds (in the Pro and Artist versions). New effects include the Auto Filter and Underwater (for atmospheric spaces for vocals and lead instruments), as well as the Shimmer effect (for ethereal atmospheres) and the Studio Delay. The Mediabay sample center has been optimized. The note editor has also been completely overhauled. For the first time, the DAW project format is also supported for exchanging project files with other compatible DAWs.

Cubase Pro 14 is now available for 579 Euros (update for 99 Euros). The beginner-friendly version is available from 329 Euros (update 79 Euros). The basic version Cubase Elements 14 costs 99 Euros (update 29 Euros).

More info

steinberg.net

New Bluetooth speakers for music production, videos & gaming

Mackie introduces the third generation of its CR active studio monitors. New features are designed to make professional monitor sound easier than ever before: Location Switch and Tone Control ensure hassle-free speaker positioning and, according to the manufacturer, always deliver the right sound - regardless of whether music production, gaming, video editing, party sound reinforcement or home music enjoyment is required. TRS, RCA and mini jack inputs enable the connection of audio interfaces, mixers, turntables or other playback sources. If headphones are connected to a CR monitor, the speaker automatically mutes. The BT models can even communicate with smartphones, laptops or other Bluetooth devices and stream music wirelessly from there in studio quality. The Mackie CR8SBT Creative Reference subwoofer is completely new. It is specially designed for combination with CR monitors and provides pressure at low frequencies. The new CR8SBT subwoofer also features Bluetooth®. When non-Bluetooth® speakers are connected to the CR8SBT, the entire system becomes Bluetooth® enabled. The new Mackie CR studio monitors will be available in Q4 2024.

More info

mackie.com

6.000 listeners
are already on board! You too?

BEHIND THE BEAT

Episode #42
with Kruder & Dorfmeister
Awareness of life in music

The "K&D Sessions", released in 1998, are not just any remix album. With one million units sold, it is one of the best-selling works of its kind. Peter Kruder and Richard Dorfmeister are now bringing the tracks to the stage on tour with live musicians - in a magnificent remaster box with bonus material, they can be heard in new splendor. This is by no means an exaggeration - artistically speaking, the "K&D Sessions" perhaps mark the pinnacle of remix culture.

Beat / I think you started remixing in 1994 and the Sessions track your path of activities until 98/99. How did you work back then?
Peter Kruder / For the first three months we made music together, all the equipment was at my place. Then we split things up again because we were both completely self-sufficient in terms of production. One of us would always start something, save it to DAT and floppy disc and give it to the other. After which he'd continue and saved it again, to DAT and floppy disc. And so it went back and forth. At the end, we usually finished things together.

PODCAST EPISODE
#42
BEHIND THE BEAT
KRUDER & DORFMEISTER
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Spotify · amazonmusic · Apple Podcasts · Pocket Casts · Castbox · Google Podcasts · podcast.de · deezer · evoone

Beat / It sounds like a process with a lot of manual labour?
Peter Kruder / Quite literally. When we did „Bug-powder Dust," we finished the track and then we also did the dub together [in the same room]. The reason being that, with the dub, even our four hands were barely enough … there were so many effects to take care of!

Beat / Did you already work with keyboards in this early phase?
Peter Kruder / Richard owned a few synthesisers, but I had nothing at all. I bought a Nord Lead later, in 1995 I think, which was my first synthesiser. Apart from that, I only really had a sampler. But I had a keyboard player on hand and he played his Rhodes for me, every key. I then recorded it on DAT and that's how I built my own Rhodes for my sampler.
Richard Dorfmeister / We already had the Rhodes, there was a Wurlitzer, a Solina String Machine. There was a Korg, there was the Moog Prodigy. But all in all, we didn't feel the need to surround us with a lot of gear. We wanted to create our own instruments. It also tended to sound much more exciting that way. You'd, for example, take a long, drawn-out vocal sound as a sample and then make a synth sound out of it. Or you'd take a very small part from the guitar and it would sound like a sequencer. This morphing and modulating of the individual parts, which enabled us to sample made it interesting.

Beat / If samples were used in the songs apart from the vocals – was it always you two playing them?
Peter Kruder / When we sampled things, we always cut the samples up completely and stitched them back together. We always tried to hide the source completely.

Beat / Why?
Peter Kruder / On the one hand, because, in terms of copyright, it was just too tricky back then. And on the other hand, because it was a very important creative aspect for us. It's much more interesting if, instead of a straight 16-bar Rhodes sample, you start off with a single chord which you then play with. That's what we did when we started and it has stayed our modus operandi for all our stuff.

Beat / The effort you invested into this part of the process must have been insane?
Peter Kruder / Yes, that's why we always thought hard about whether to really sample a beat or a passage or not. I knew that as soon as I'd sampled it, it would take me another three hours to make it fit. It really separated the wheat from the chaff and helped a lot in the decision-making process. But sometimes you'd sit there all day and just listen to samples and still nothing came out of it.
Richard Dorfmeister / This hit-and-miss thing is part of studio life. You just have to learn to accept that certain things take up a lot of your time and then don't actually add anything to the track. But then again, they might be great for something else. None of what you do in the studio is ever in vain.

Beat / I don't want to romanticise this era, but quite a lot of fruitful things would happen in the time spent waiting for the machines.
Peter Kruder / Yes, absolutely. For example, when we used to record a singer, the left track would be the playback and the right track the singer. We recorded the vocals to DAT and then played the DAT into the sampler, arranged it in Cubase and then threw away the left track with the playback. That way, the singer would be perfectly matched. It wasn't time-consuming and while we were busy with the arrangement, the singer could relax again, think about how he'd do the next take or what to try. Nowadays with hard disc recording, the singer no longer gets a break, you press record, it's done, then you press start and it goes on again. And that makes a difference, when it comes the dynamics, and for your ears as well. You don't get that sensation of hearing the music fresh again. I've tried all sorts of things to achieve the same effect in this day and age - right down to setting an alarm clock on the phone, which tells you to get up, get a glass of water and take a break.

Beat / As Kruder & Dorfmeister, you never recorded an independent artist album in the 90s. But if you took the vocals from the Sessions, it would actually be your music, wouldn't it?
Richard Dorfmeister / That's a good point, I have to say. It's true - the songs would actually be ours. But on the other hand, these version with the vocals is how everyone knows them. It's a very good question, though.
Peter Kruder / The great thing for us was that these remixes were promoted extremely well. Back then, every music magazine had an advert for Bomb The Bass or Depeche Mode - it was everywhere. It helped us a lot to be able to use this system without having to sign with anyone. We were able to use the whole apparatus brilliantly and that meant our sound got distributed very widely.
Richard Dorfmeister / And it was also hot. There weren't 3000 labels like there are now, where everyone has a label of their own. There were these 10, 15 really good labels that you wanted to be a part of. Those were the imprints you wanted to work with.

Beat / Music that is hot in its time often doesn't stay hot for long. Why do you think it's different with your remixes?
Richard Dorfmeister / I think it's because, in the end, it was more than just the remixes. It was also about a kind of attitude that was projected into the whole thing or which the music radiated. It meant that the whole was more than the sum of its part and that you could build a feeling around that. Our sound expressed a very particular feeling of the time very well. We felt that way and made music accordingly.
Peter Kruder / It was important to us to bring a certain slowness and relaxation into the music. For us, it was really an alternative to the techno movement of the time, something more musical. Something you could let yourself fall into.

What's next? Listen to the complete interview in the podcast:

www.beat.de/podcast

Song Starter

Perfect Drum Mixdowns thanks to Split-Channel Mode

Take a look at YouTube and get inspired

www.youtube.com/@BeatMagazin

Unfortunately, your muse isn't available at the touch of a button – inspiration is! From now on, in cooperation with the EMS – Electronic Music School, we'll be providing you with fresh Song Ideas, Track Templates, Samples and MIDI Files every month as a creative injection that will give you new ideas. This will bring a breath of fresh air into your routine or break completely new music ground. Whether you're a fresh Beatmaker or an experienced Sound Tinkerer, you'll find what you're looking for here! by Jeyênne

Most drum plug-ins offer several individual outputs and for good reason. Although the stereo sum can usually be assigned an internal compressor, in most cases that's it. If you only want to use your signature Reverb or your favorite Tape Saturation for the kick, you won't get any further with just a stereo out.

In the video, Jeyênne shows you how to quickly and easily place the drums on individual tracks and process them optimally so that the beat sounds as fat as possible at the end.

www.em-school.com

THE AUTHOR

At the EMS - Electronic Music School, you will learn everything from Composition and Production of Electronic Music to DJing and Marketing your own tracks - exclusively from professionals working in the music scene. The aim is to help you produce and sell Electronic Music professionally. Create club-ready tracks that meet current standards, optimize your DJ gig and live act and get off to a successful start.

The focus is on support on a personal level with an individual approach, from the beginning of Production to the Professional Music Business. With branches in Berlin and Cologne, as well as our online offering, we provide preparatory courses, workshops and individual coaching for aspiring Music Producers, DJs and Artists.

We are more than just an ordinary music school - we are authentic and close to the music scene - we are an Artist Network of Producers, DJs and Musicians.

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Next-gen standalone expressive synthesizer.
Add emotion & movement to your music with a simple touch.

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FACTS INSTEAD OF MYTHS

STUDIO MONITORS

20 HEADPHONES & SPEAKERS REVIEWED

FOR YOUR PERFECT SOUND

Honest sound or whitewashing, reference monitor or blender? In the special you will learn everything about the properties, from neutrality to near and midfield monitors to active and passive options. We will examine areas of application in music production and film and give tips on the optimal product selection and placement. Perfect for anyone who wants professional mixes! Plus a market check on all current active devices including suitable headphones. **by Christoph Strauß, Jan Wilking, Laura Emiliano, Marco Scherer**

Almost exactly 100 years ago, in 1925, the first electrodynamic loudspeaker came onto the market. The concept for this was actually invented earlier, along with the development of the telephone. However, it was not until the 1920s that the amplifiers needed to operate the loudspeakers were built. From then on, things happened very quickly: in 1931, the bass reflex principle was patented. One year later, the first 2-way system was developed. Another year later, in 1933, the 3-way system was developed. Due to the rapid advances in developments, increasingly powerful systems came onto the market, up to our current monitors, which can be controlled digitally via DSP.

Jump to the present

Nowadays, speakers are indispensable. They are omnipresent: in smartphones, headphones, cars and so on - and one of the most important tools for sound creators. They are the final instance of signal transmission between the output of our DAW and our ears. This is precisely why they have to work reliably and reproduce an honest, unadulterated sound. In order to be able to judge this, various aspects should be taken into account, such as design, transient reproduction, frequency division and positioning.

This is exactly what our special in this issue is about. We explain what to look out for, how you can optimize your monitors and how you can create a perfect listening situation.

MORE ABOUT THE HISTORY OF LOUDSPEAKERS

If you would like to find out more about the development and history of loudspeakers, you can do so via this link or QR code: www.aes-media.org/historical/html/recording.technology.history/loudspeaker.html

Tips & tricks

Discussions in the audio sector often drift into the esoteric. Online in particular, many people always know better. Monitors are no exception. We have therefore put some of these statements, such as „mono compatibility is still essential“ and „active crossovers work more reliably than passive ones“, to the test. In addition, producer and engineer David Merkl reveals in an interview how he ensures the quality of his work.

You should also definitely take a look at our tips for purchasing monitors, which are accompanied by tests of current loudspeaker models.

Sounds strange

Everyone who heard the NS-10 from Yamaha or the Mixcubes from Auratone for the first time probably thought these two words. The iconic speakers from the 1970s can still be found in many recording studios and have a right to exist for good reasons. You can find out what these reasons are and what new editions are available on the following pages.

Mixing with headphones

In addition to using monitors, many people also use headphones. The great thing about them is that they can serve as a mobile work tool and as a reference monitor at the same time. But there are dangers lurking when mixing that can ruin a production. To prevent this from happening to you, we have put together the ten most important tips for mixing with headphones. Our tests of the new models from Adam Audio, Austrian Audio, Audeze, Beyerdynamic and many other renowned manufacturers also give you an overview of the current market situation. ⁘

3 REFERENCE MONITORS WITH LEGEND STATUS

1 Auratone Mixcubes

The Mixcubes have only one driver and are therefore mid-heavy. Without low-frequency resonances and high-frequency distortions from crossovers, they are valued for their unadulterated sound.

2 Yamaha NS-10

The NS-10 are particularly popular for their fast response time and the associated accurate transient reproduction. Just like the Mixcubes, they are mid-heavy and are therefore also suitable as a reference for consumer devices.

3 Sony ZS-M1

A kitchen radio that served the well-known mixing engineer Chris Lord-Alge as a consumer reference - like mobile phone speakers today. Because of this, the device was traded at horrendous prices at times.

Photo: Auratone

Photo: Christoph Strauß

Photo: minidisc.wiki

What to consider when buying speakers?

The 7 most important questions about studio monitors

The most important tool for judging mixes are - of course - the studio monitors. But what should you look out for when choosing studio monitors? Why is it important that they have a linear frequency response? And are 2-way or 3-way speakers the better choice for studio monitoring? We'll tell you in a moment! Look forward to answers to the most frequently asked questions about studio monitors.

1 | Why is a linear frequency response important for studio monitors?

While hi-fi loudspeakers require a beautifully colored character, the frequency curve of studio monitors should be as linear and even as possible. This allows precise and genuine reproduction of the audio material without excessive emphasis or attenuation of certain frequencies.

2 | What is the difference between near and midfield monitors?

The main difference lies in their size and their radiation behavior. Nearfield monitors are smaller and have a wider beam angle, making them ideal for small studios. Since they are designed for listening distances (1-2 meters), they minimize room reflections. Midfield monitors are larger, have narrower beam angles and are suitable for larger studios and a greater listening distance (2-4 meters). Which option is best for you depends on the size and acoustics of your studio.

3 | Are 2-way or 3-way speakers a better choice for studio monitoring?

2-way monitors integrate one speaker for the highs and one for the lows, while 3-way studio monitors also have one for the mids. Due to their simpler construction, 2-way systems are usually more cost-effective and require less space. Compared to 3-way systems, they are less prone to phase problems. 3-way studio monitors offer extended frequency coverage, more pronounced bass and higher performance, which is an advantage in larger studios.

4 | Do I need a subwoofer?

Especially if you use smaller studio monitors, a high-quality subwoofer is a useful addition so that you can really hear and feel the low frequencies that are so important for club music. It is important that the main speakers and the subwoofer are well matched. Since the main speakers then only reproduce the mids and highs and no longer the particularly high-energy bass, their sound reproduction is cleaner and less distorted.

5 | Why do many studios use hi-fi speakers in addition to studio monitors?

While studio monitors are designed for precision and neutrality, hi-fi speakers often offer a sonic coloration that is more similar to listening to music in different environments. This allows you to ensure that your music sounds good on different playback devices.

6 | How important are design and material for the sound of tweeters?

Design and material have a significant influence on tweeters. For example, the inverse dome design of Focal's studio monitors enables greater dispersion and higher dynamics. Tweeters made of beryllium are still a relatively new development. This material is characterized by greater rigidity with the same mass compared to aluminum and titanium, which enables more precise high-frequency reproduction.

7 | What should I bear in mind when positioning studio monitors?

Ideally, the speakers should be placed about 1.5 meters away from walls or corners to avoid excessive bass reflections. For the optimum listening position between the monitors, an equilateral triangle with the listener's head as the apex is recommended, with the tweeter positioned at ear level. The decision as to whether you set up your studio monitors horizontally or vertically depends on your room and the speaker arrangement. In order to avoid resonance from the table top or floor, they should be acoustically decoupled from the surface using foam mats, for example. ::

Podcasts, streams & small rooms

Monitoring for every situation

A large hall with a big mixing desk, speakers built into the wall, perfectly balanced acoustically and a comfortable couch in the corner. Most people only dream of studios like this, because space and budget don't always allow it. But the requirement is the same everywhere: the best possible sound is needed. And sometimes mobile, for podcasts, streamers or home producers. Fortunately, Yamaha has an affordable solution that is quite flexible ...

The HS series speakers have been trusted by many sound engineers, producers and artists around the world for years. The HS3 and HS4 are powerful tools for creating a wide range of audio content - from music production to video editing - for all creatives who have limited space and need to keep the volume low, but do not want to compromise on quality.

The HS3 and HS4 continue the design philosophy and know-how of the previous Yamaha studio monitors. The result is a powerful Class D amplifier, a heavy-duty MDF cabinet and woofers and soft dome tweeters that deliver a source-faithful sound despite their small size. They also feature the patented „Twisted Flare Port" technology, which reduces air turbulence in the bass reflex port and thus ensures clear and precise bass.

This is why the HS3 and HS4 deliver very good resolution, sound image and depth – with a linear frequency response across all bands without distorting the original sound.

To the product video [1]

AT A GLANCE: YAMAHA HS3 & HS4

- Compact studio monitors (1x active, 1x passive)
- HS3: 2-way bass reflex active loudspeaker with 3.5" membrane woofer and 0.75" dome tweeter
- HS3: 70 Hz - 22 kHz frequency response (-10 dB)
- HS4: 2-way bass reflex active loudspeaker with 4.5" cone woofer and 1" dome tweeter
- HS4: 60 Hz - 22 kHz frequency response (-10 dB)
- 26 W + 26 W output power (dynamic, RL=6 Ω)
- Options for sound adjustment using ROOM CONTROL and HIGH TRIM
- XLR/TRS jack (COMBO), RCA and stereo mini inputs
- Stereo mini cinch cable, speaker cable and anti-slip pads included

Pair price HS3 297 Euro | **Pair price HS4:** 344 Euro

Sound tailored to the environment

The sound produced by speakers is often influenced by the environment. The rear panels of the HS3 and HS4 are equipped with ROOM CONTROL and HIGH TRIM functions, which allow you to achieve the ideal sound for any environment. For example, reducing unnecessary, exaggerated low frequencies that often occur when placed close to a wall.

Inputs for every application

The rear panels of the HS3 and HS4 are equipped with combined XLR/TRS jack, RCA and stereo mini connectors, which allow the connection of devices such as computers, audio interfaces, mixers and instruments. The most commonly used functions - power button, volume control and headphone jack - are located on the front.

Compact and portable

The compact size was made possible by the Class D amplifier. Using one amplifier for two speakers has made it possible to both reduce the overall weight of the speakers and simplify cable connections. Even in a small bedroom studio, they take up little space and are also easy to carry.

[1] https://www.youtube.com/watch?v=7rWviaR1nxA

Truth or ...?

Monitoring myths clarified

There are many myths and claims surrounding the topic of „monitoring". They range from the positioning of loudspeakers to the perfect listening level. We have checked for you which of them are true and which are complete nonsense.

Monitoring is actually a simple matter: set up the speakers, calibrate them, and you're done. The reality is, of course, different. Anyone who spends some time looking into the subject will quickly realise that it can be quite complex. And there are countless myths about it circulating on the internet.

That's why we've searched through a few forums and checked a few selected claims. The following two pages are not only intended to be entertaining and informative, but also to serve as a small wiki for you in the future.

1 // The bigger the speakers, the better the sound.

Speakers are basically divided into the categories Near, Mid and Far Field. The names provide information about the location in relation to the distance from the listener, and about the size of the drivers. It is clear that smaller monitors should be placed closer to the listener than large ones. And so you often see near-field monitors on mixing consoles or next to screens.

Far-field monitors, on the other hand, are the big chunks that are often embedded in walls in studios. Accordingly, there are usually several meters between the speaker and the listener. Mid-fields are consequently the intermediate solution and are designed for medium distances.

It is important to know that smaller drivers generally reproduce the low range worse than large drivers. However, due to the distance when listening to far-field speakers, the room acoustics are more important.

To claim in principle that large speakers sound better than small ones is of course completely absurd. Which type of monitor is suitable depends on the size of the room, the acoustics and the listening position. And last but not least on the quality of the material and workmanship of the loudspeaker. In addition, near and mid fields can be expanded with a subwoofer if their bass reproduction is not satisfactory.

Bigger is not automatically better.

2 // Monitors can generally be positioned both vertically and horizontally.

In short: wrong. Speakers are designed in a certain way to radiate as precisely as possible. The radiation and sound behavior can be negatively affected if positioned incorrectly, due to the baffle step, among other things. In addition, many speakers are equipped with a waveguide. Its job is to balance the radiation of low and high frequencies as best as possible. This can also cause problems if positioned incorrectly.

However, there are monitors that can be positioned both horizontally and vertically. The tweeters and/or waveguides can often be rotated on these. To be on the safe side, you should check the manual for your monitors or ask the manufacturer.

3 // Loudspeakers must be decoupled.

Loudspeakers should be placed on a surface that prevents vibration transmission and the associated loss of sound. That's true. Rubber feet are typically used to compensate for the vibrations of the monitors. This is known as decoupling.

However, there is also the opposite variant, namely a coupling. In this case, so-called spikes, cone-shaped feet, are attached to a support plate with the tip pointing downwards. The difference between decoupling and coupling lies in the application. The former is

Vibration transmission from loudspeakers can be avoided by coupling or decoupling. Photo: Nubert

recommended for firm, hard surfaces such as parquet or stone. The latter for soft surfaces such as carpet or screed.

4 // 85 dB SPL is the perfect level for mixing and mastering.

Based on the Fletcher-Munson curve, we hear frequencies in the range of 85 dB SPL (C-weighted) most evenly. This value is therefore recommended as a guideline. However, each of us has our own preferences. Some mix and master more quietly, others loudly. The size of the room and your own preferences also play a role.

It is best to try out different levels and pay attention not only to how you perceive the frequencies, but also to how quickly your hearing tires. Once you have found a suitable level, it is advisable to save it as a reference. This will make it easier for you to evaluate your productions.

5 // Mono compatibility is still essential.

A question that is controversial these days. In general, it doesn't do any harm to mix mono-compatible. However, even most smartphones are now equipped with stereo speakers. Pure mono listening is becoming increasingly rare. In addition, most modern productions are already designed in such a way that all the important elements are in the middle. Therefore, mono compatibility is a point that can certainly be neglected.

6 // Passive speakers are better than active ones.

Passive and active monitors each have their own advantages and disadvantages. The latter are an all-round solution: connect, switch on and off you go. Many active speakers also offer DSP functions that make sound tuning easier. Ideally, each driver is powered by its own amplifier. In the case of 2-way monitors, this means two amplifiers (bi-amped). This increases the sound quality and impulse fidelity.

The passive variant offers more flexibility, but also requires more knowledge. The speakers must be powered by an external amplifier that is tuned to the monitors and also requires additional space. You can put the components together yourself and upgrade them if necessary or replace them more easily if they break.

There is no general answer to whether passive speakers are better than active ones. It depends on the space, experience in this regard and budget. Smaller studios with near-field monitoring will certainly like an active solution. Larger rooms with far-field systems will probably opt for passive systems.

3-way systems offer dedicated drivers for highs, mids and lows.

7 // 3-way speakers are preferable to 2-way speakers.

The idea behind 3-way monitors is to have separate drivers for mids and lows. Consequently, these frequency ranges should be represented more accurately than with 2-way speakers. In theory, 3-way speakers are therefore preferable to 2-way speakers. Whether you can really work better with them depends on your own listening habits and can only be found out in an A/B comparison.

8 // Active crossovers work more reliably than passive ones.

Crossovers are elementary components of monitors, and you should know a few things about them. Here, too, a distinction is made between active and passive components. Just like with loudspeakers, passive crossovers work without an external power supply and active crossovers only work with a power supply. However, passive crossovers work less precisely than active crossovers and can only dampen signal components, not amplify them. This can lead to performance limitations, because low frequencies require more energy than high ones.

There are also different types of filters in crossovers:

- Butterworth: Characterized by a flat amplitude response. In addition, the balance between phase position and amplitude linearity is balanced.
- Linkwitz-Riley: A high slope with a very good phase position of the crossover frequency.
- Bessel: The high phase linearity makes this filter interesting for phase-critical applications.
- Chebyshev: A filter with a very high slope, which, however, results in a wavy amplitude response.

In the pro audio sector, you will mainly be dealing with Linkwitz-Riley or Butterworth filters. Apart from that, the statement that active crossovers work more reliably than passive ones is true.

Subwoofers can complement monitors that have weak bass.

9 // The bass reflex port should face forward.

You often hear that the bass reflex port of a monitor should face forward. In fact, the direction of the port does not affect the sound. Not even if the speaker is close to a wall or in a corner, because then the boundary surfaces of the wall are responsible for bass amplification and not the direction of the bass reflex port.

10 // You don't need monitors that go beyond 20 kHz.

The human hearing range is from 20 Hz to 20 kHz, at least that is considered the standard range. There is no doubt that this is of course individual and decreases with age. That is why you often stumble across statements that you don't need monitors that go beyond 20 kHz. After all, you no longer hear these frequencies anyway. That is at least the argument.

However, everyone who consumes or works with audio has certainly noticed at some point that they also physically perceive sound. The best example: the pressure of a subwoofer.

The same applies to high frequencies. Even if you no longer hear the shelf boost at 22 kHz, you may feel it depending on the application. So to say in general that everything outside the audible range is unnecessary is nonsense. After all, you don't use a high-cut filter at 14 kHz, for example, just because you can't hear anything above it yourself...

11 // An audio interface is sufficient as a monitor controller.

In a very simple studio setup with a pair of speakers, you can certainly use an audio interface as a monitor controller. Even inexpensive interfaces can now play speakers with little noise and tolerable loss of quality.

However, if you want to use several monitors for listening or even integrate external players, you will quickly reach your limits. In addition, many monitor controllers are equipped with an integrated talkback microphone, which frees up another input on the interface.

Expert talk with David Merkl

Between precision and emotion

David Merkl is one of the most sought-after sound engineers in the world. His references range from Herbert Grönemeyer to David Garrett and Bennett. In the interview, he explains what is important in mastering, what constitutes reliable monitoring and what he thinks about room simulation software.

David Merkl's second home, the msm studios, is located in an inconspicuous backyard in downtown Munich. According to muso.ai, the experienced sound engineer and expert in immersive audio is among the top 1 percent of mixing and mastering engineers in the world. His portfolio includes well over 1,000 works in a wide variety of genres, from Pop to EDM to Classical.

Despite many requests, the 37-year-old took the time to answer a few questions about „mastering" and „monitoring."

Beat / Why don't your studios have different pairs of monitors to check mixes and masters?
David / In our msm studios, the room and loudspeaker system form a unit that is specially coordinated with one another - for us, it's a real symbiosis. The mastering control rooms were designed by studio acoustician Jochen Veith and the loudspeaker systems were precisely calibrated so that every aspect of the sound is reproduced without distortion. Exact coordination between the room and the loudspeakers is particularly important in the bass range and in the lower mids, where many sound details are hidden.
In our finely tuned environment, I can really hear what's happening in the music without being irritated by, for example, annoying reflections or overemphasis of frequencies. Another pair of monitors would therefore be superfluous.

Beat / Is it essential to use a subwoofer?
David / The decision to use a subwoofer depends heavily on the room. With surround and immersive formats, the question is irrelevant because we have to use an LFE channel.
In our stereo control room, we use subwoofers to ensure that frequencies below 30 Hz are reproduced accurately. This works because the speakers, including the subwoofer, were specially designed for the control room and perfectly coordinated with each other. Jürgen Beckers (monitor db) developed them specifically for our room. Without special tuning and calibration, the subwoofer could impair the sound rather than enrich it.

Beat / Do you check using consumer devices (mobile phone, headphones, etc.) or simulation software?
David / Since we work in acoustically optimized rooms that are designed to mastering standards, an additional check on other playback systems is not necessary for me. We have eliminated the influences of poor building acoustics and inadequate room acoustics so that we can actually hear what is happening in the signal. This means I can do without headphone or smartphone checks.

Beat / The "Car Test" is still a relevant topic. What do you think about it?
David / The „car test" plays no role in our workflow. Many modern cars have complex audio processing systems that can already have a strong influence on and distort the sound. This test is therefore not very useful for our work. In our studios, thanks

ABOUT DAVID MERKL

Photo: Kai Neunert

David Merkl is an engineer and producer. He has been shaping the German and international music scene for more than a decade and works for independent and major music companies across all genres. In addition, the immersive audio expert is in demand as a lecturer and holds training courses and master classes for institutes such as the ARD.ZDF Media Academy and the Royal Conservatoire Den Haag in the Netherlands.

The stereo control room's monitoring system was specially designed and tuned for this room. Photo: Ralph Schirrmeister

The immersive studio is equipped with a 9.1.4 speaker system. Photo: Ralph Schirrmeister

to the optimal room acoustics and precise speaker settings, we know that the music sounds the way it should, and we do not need any additional tests in the car.

Beat / Would you recommend room emulation software like Abbey Road Studio 3 by Waves or VSX by Steven Slate?
David / For producers who work on the move or do not have optimal room acoustics available, room emulation software can actually be a help. Such tools make it possible to precisely assess balance and spatial sound even in less than ideal environments.

Beat / Do you really need room correction systems or can you simply equalize using an EQ in the DAW?
David / I would definitely recommend room correction systems. In our immersive control rooms, for example, we use systems from Trinnov, which work with exceptional precision and ensure that the acoustic conditions are always optimal. A simple EQ in the DAW cannot replace this, as it only allows selective interventions and does not correct the specific room acoustics.

Beat / Monitors are often decoupled using rubber feet or similar. You decided to use stone slabs on a rubber mat in your immersive studio. How did this rather unconventional setup come about?
David / Using stone slabs as stands for our front speakers instead of conventional solutions offers several advantages. On the one hand, the slabs dampen vibrations very well due to their high mass and density, which minimizes unwanted resonances and vibrations. This leads to a more stable, less distorted reproduction and increases precision in the bass range. On the other hand, they have a larger contact surface, which improves the stability of the speakers.

The msm studios have also been represented in Berlin since 2023. Photo: Jochen Veith

Beat / The sweet spot is usually aligned with the sound engineer's seat and is quite limited. How do you handle this when mastering with customers?
David / During the mastering process, I sit in the sweet spot so that I can make and assess the sound changes. Meanwhile, the customer sits next to me. Once I am satisfied and have taken the customer's wishes into account, we switch seats so that he/she can also get a precise impression of the sound.

Beat / What do you think are the three most important criteria/aspects to consider when mastering?
David / That's a good question that's not so easy to answer. I would say:
1. The emotionality of the music must be preserved and enhanced during mastering - that is ultimately the core that appeals to the listener.
2. Less is often more: Excessive interventions during mastering often lead to an unnatural sound. It is advisable to work subtly.
3. Always stick to the customer's technical specifications. Even the best-sounding master cannot be released if it does not meet the specifications.

Beat / How do you ensure that masters sound good on all streaming platforms, despite their different specifications/recommendations?
David / For me, it is crucial to never set the music to a volume higher than -1 dBTP. Since many platforms still work with data-reduced formats, this allows me to avoid unwanted distortions in the signal. When it comes to program dynamics, I always follow the genre and artistic ideas - i.e. the vision and aesthetics of the respective artist. Everything else quickly becomes an esoteric matter..

I also don't think it's useful to create masters specifically for a certain streaming platform. The platforms are not individually equipped with special files; rather, the label provides a master file that is then used everywhere.

www.davidmerkl.com
www.msm-studios.com

IT DOESN'T ALWAYS HAVE TO BE EQ...

Using reverbs can color the sound in a similar way to an EQ, as they emphasize or attenuate certain frequency ranges and thereby subtly influence the tonal spectrum. Reverbs give the lows and highs specific resonances, which are often perceived as natural fullness, without having to directly raise or lower certain frequencies. This provides tonal balance and warmth, especially in rooms with a lot of reflections. Unlike an EQ, which specifically isolates certain frequencies, the spatial sound of reverbs creates a three-dimensional depth that makes the mix seem more organic and coherent.

6 studio monitors for every budget

Auratone
5C Super Cube

The Auratone 5C Super Cube, a classic among studio monitors since its introduction in 1958, is now presented for the first time as an active model. This ultra-compact 1-way system remains true to its original concept: a single 114 mm driver in a closed housing ensures phase-accurate midrange reproduction and precise spatiality, which are essential for reliable mix decisions. By integrating modern Class D technology into the design, Auratone was able to make the leap to active monitors without sacrificing the sonic virtues. The new connections on the rear modernize the classic format.

The 5C Super Cubes are particularly impressive in the mid frequencies. Their stereo image is extremely precise, as all sound waves emanate from one point and avoid phase problems. They are not suitable for club mixes due to the strong drop in the low frequencies, and the lowered upper treble also speaks against using them as primary monitors. The robust, closed MDF housing minimizes distortion and allows flexible setup options - even close to the wall.

Verdict

With a very linear midrange image and precise stereo panorama, the compact sound cubes are perfect for checking whether the mixes work on everyday playback devices such as smartphones or computer speakers. This is because these monitors have neither pronounced bass nor treble reproduction, the focus is on the sensitive midrange. The compact sound cubes are also suitable as a second monitor to assess midrange-heavy material such as vocals in the mix and stereo field.

Web: www.auratone.de
Distribution: Audiowerk
Price: 779 Euro (price per pair)

Rating:

Swissonic
V8

The studio monitors from Thomann's own brand Swissonic score points with their solid workmanship and rich sound. The V8 model is equipped with a 2-way system, with an 8-inch woofer and an Air Motion Transformer (AMT) tweeter, which is powered by a Class D amplifier with 90 watts (70 + 20 watts) of power.

The AMT tweeter ensures clarity in the high-frequency range without sounding unpleasantly sharp - a successful compromise that the engineers have found here. The connection options on the back are versatile. Two trim controls allow the low and high frequencies to be adjusted, allowing the speakers to be tuned to the acoustics of the room - a useful feature for different studio environments. Thanks to the standby function and the adjustable input sensitivity, the monitors can also be controlled efficiently.

The V8's sound scores particularly well with electronic music. The bass sounds tight and detailed, the highs appear fresh and clear. This tuning creates a direct and energetic sound that is a joy to produce and listen to. However, the lower mids are slightly underemphasized, which can affect the depth of the sound.

Verdict

The Swissonic V8 are a good choice for beginners on a limited budget or as a second monitor in larger studios. They reveal their full potential, particularly with modern electronic music, thanks to their direct sound, fast transient reproduction and clear highs. With good workmanship and a sound that inspires, the V8 offers a surprising amount for their price.

Web: www.thomann.de
Distribution: Retailer
Price: 159 Euro (price per unit)

Rating:

Focal
Trio6 BE

The Focal Trio6 active studio monitor offers the unique option of switching between a 1-way, 2-way and 3-way configuration using a footswitch. This makes it easy to check how your mix translates to different monitoring systems. The reddish-brown finish in Red Burr Ash gives these speakers an appealing aesthetic. The speaker can be positioned horizontally or vertically and has a beryllium dome tweeter, a 5-inch midrange driver and an 8-inch subwoofer for first-class sound quality. This makes the Trio6 ideal for extended mixing sessions thanks to its transparent and detailed sound.

The first impression: A balanced, honest sound. The bass is soft and warm, the mids are detailed and the highs are silky. Thanks to the transparent reproduction, weaknesses in mixes can be recognized immediately. Listening always remains pleasant - the speakers do not overload the ears even after hours of listening to music.

With their deep bass and precise lateral staggering, the Trio6 speakers are suitable for both music and speech projects such as radio plays. An additional subwoofer is unnecessary in most cases.

Verdict

With a price of around 3200 euros each, the Focal Trio6 BE is clearly aimed at professionals, but the investment is worth it. The speakers offer flexibility and a sound that you won't want to miss. They are an excellent choice for demanding studio work, be it mixing or mastering. The Focal Trio6 BE are ideal for long studio days and a must for professional users who do not want to compromise on sound quality.

Web: www.focal.com
Distribution: Sound Service
Price: 2675 Euro (price per unit)

Rating:

AiAiAi
Unit-4 Wireless+

It couldn't be more mobile: The compact AiAiAi Unit-4 Wireless+ speakers run on internal batteries, so they don't require a wired power supply. And the audio sources can also be connected wirelessly via Bluetooth or Wireless+, for which a suitable transmitter is included.

The 2-way bass reflex design with a 4" woofer and 1" silk dome tweeter offers a frequency range of 50 to 20,000 Hz. The compact housing (200 x 340 x 340 mm) is both functional and elegant - the LED ring around the woofer is a visual highlight. The battery lasts up to 20 hours and charges quickly with the included power supply.

The 5-band EQ and the LED ring function can be adjusted using the AiAiAi app. Bluetooth 5.2 and a 6.3mm TRS input offer versatile application options. Wireless+ delivers uncompressed CD quality with low latency, ideal for music productions.

The speakers offer clear, detailed sound with silky highs and powerful bass. The connection via the transmitter offers a noticeable quality advantage over Bluetooth.

Verdict

At just under 800 euros for a pair, the Unit-4 is no bargain, but it does offer a lot for the money. Thanks to battery operation, Wireless+ and Bluetooth, they can be used anywhere without a single cable, and their compact form makes them easier to transport. Wireless+ in particular, with uncompressed CD quality and low latency, is a big advantage over pure Bluetooth solutions, especially for jams and music productions. And the small speakers not only sound good, they also look very stylish.

Web: www.aiaiai.audio
Distribution: Sonic Sales
Price: 799 Euro (price per pair)
Rating:

reProducer Audio
Labs Epic 4

The Epic 4 from reProducer Audio Labs is the ideal solution for compact studio environments, as the 2-way monitors with bi-amping are surprisingly powerful despite their modest size. Their compact design makes them ideal for tight spaces such as bedroom and desktop studios, as well as for complex multi-channel audio setups, including 5.1 or Dolby Atmos systems.

Their housing, a sophisticated combination of aluminum and medium-density fiberboard, reduces unwanted resonances to a minimum. Powered by 50 watt RMS Class D amplifiers each, the 4-inch woofer and 1-inch tweeter produce a lively and detailed sound. The bass reproduction benefits from a cleverly used passive membrane, which ensures powerful, precise bass - even with the compact size of the monitors.

Another highlight is the analog signal processing. The Epic 4 shines with transparency and a wide stereo image without losing detail at low volumes.

Verdict

The Epic 4 speakers surprised us positively in the test and are a real recommendation for every desktop studio due to their compact dimensions and balanced sound. The manufacturer has dispensed with extensive DSP functions and paid full attention to well thought-out tuning. Transparency, richness of detail and stereo image are very well done, as is the precise bass reproduction. In contrast to some competing models, the Epic 4 sounds convincing even at low volumes and feels at home with all styles of music, whether analyzing your own mix or just enjoying music.

Web: www.reproduceraudiolabs.com
Distribution: Tomeso
Price: 1349 Euro (price per pair)
Rating:

HEDD
Type 05 MK2

The HEDD Type 05 MK2 stands for the highest precision through the latest digital technology. This active two-way bass reflex loudspeaker with AMT tweeter and 5-inch bass-midrange speaker not only offers outstanding impulse response, but also signal-accurate tuning. Powered by two 100-watt Class D amplifiers and with digital signal processing at 32 bit/96 kHz, it impresses with its precise reproduction in various setups.

The monitor can be operated with either open or closed bass reflex ports thanks to the integrated CoP functionality. A simple rotary switch controls the adjustment of the bass reproduction. The HEDD Lineariser also provides phase correction and eliminates phase distortion.

The AMT tweeter reaches up to 40 kHz and offers excellent impulse response. The mid-woofer completes the setup so that a frequency range of 45 Hz to 40 kHz is covered. If required, it can be extended to 38 Hz by activating the extended bass spectrum. Controls for shelving filters, desk filters and input sensitivity allow practical adjustments.

Verdict

The HEDD Type 05 MK2 is an impressive near-field monitor that shines in various setups thanks to its DSP linearizer and CoP functionality, especially for Dolby Atmos. With a price of around 800 euros, it offers excellent value for money and scores as a „Made in Germany" product. The sound is clear and detailed, which means that even the finest nuances are reproduced precisely. The comprehensive optimization via the powerful DSP and the five-year extended warranty highlight its high quality.

Web: www.hedd.audio
Distribution: Retailer
Price: 749 Euro (price per unit)
Rating:

History and innovations of cult brands

From the „white cone“ to the perfect sound

Anyone who has ever looked into studio monitors in more detail has inevitably come across the brands Auratone, Avantone Pro and PSI Audio. The „white cone“ is too important, the Super Sound Cubes too indispensable and the sound of the hand-made monitors from the Swiss company PSI Audio too remarkable. But why is that and why should you know about it? We'll explain now...

The origins of the Auratone 5C date back to the 1970s, when they became the standard in many studios around the world. The small speakers were valued for their ability to check mixes for their translatability to simple hi-fi systems. When talking about Avantone Pro, one must also mention the connection to the Auratone 5C, as Avantone Pro has created a modern homage to these iconic speakers with their MixCubes.

Another milestone in the history of studio monitors are the CLA-10 boxes from the same manufacturer. These monitors are direct replicas of the famous „White Cone“ speakers that achieved legendary status in the music industry. These were valued for their pristine sound, which allowed sound engineers to create mixes that sounded good on a variety of speaker systems.

PSI Audio from Switzerland, on the other hand, is known for its high-precision studio monitors, which can be found in many of the most prestigious studios in the world. Their commitment to quality and acoustic accuracy has earned them a reputation for producing some of the best monitors on the market. PSI Audio combines cutting-edge technology with a deep understanding of acoustic science to deliver products that are valued for their neutrality and attention to detail.

Special feature: Everything is made by hand in Switzerland, in exclusive cooperation with local companies within close proximity.

Auratone 5C Super Sound Cube

www.auratone.de

In the 70s and 80s, Auratone took the professional audio world by storm with its 5C Super Sound Cube passive studio monitors. In 2015, the legendary sound cubes returned and still impress with their unique properties. The incomparably clear midrange, precise stereo image and outstanding depth make the Auratones the perfect tool for uncompromisingly honest listening. Since only a single driver is used, they are the ideal point sound source. The linear frequency response delivers a reliable, unadulterated sound at both high and low levels. Thanks to their compact dimensions, the reference speakers are particularly easy to transport and can be positioned flexibly. Only high-quality components are used inside the robust housing with classic mahogany veneer.

Linear frequency response and excellent midrange representation

The Auratone 5C monitors owe their popularity to the fact that they are not a solution for the ivory tower - the sound cubes are more of a robust everyday tool. In addition, with a balanced frequency response and transparent sound, they reveal every detail in the mix without compromise. Especially in the difficult midrange, they offer an outstandingly clear sound that reproduces every nuance of the signal faithfully and honestly. This made them the reference in many studios 40 years ago, from film production to broadcast operations to classic recording studios. And even today, the legendary sound cubes still inspire the professional audio world with their unique properties.

Good to know: Auratone 5C Super Sound Cube

- Passive point source.
- Today manufactured by the nephew of the original founder.
- Was and is used by everyone from Quincy Jones (Michael Jackson's „Thriller“ album), Paul McCartney to Jay-Z.
- Very good for checking the stereo field and the mid-range of a mix.
- Standard in recording studios and even OB vans worldwide.
- Completely made in the USA to this day.
- Now also available in an active version to save on a separate amplifier.

Watch video [1]

[1] https://www.youtube.com/watch?v=CRvEFNkw-d4

Avantone Pro CLA-10 Passive

www.avantonepro.com

The „white cone“ is back! Avantone Pro has developed - in collaboration with mixing legend Chris Lorde-Alge - the most faithful replica of the most iconic studio monitor of all time. Now anyone can mix on the monitors that shaped the „hitmaker sound“. An incredible amount of development work was done to make this monitor available to everyone. Black housing. White cone. Wide frequency response. This monitor is not famous as the best monitor, but as the best reference - the sound that produces hits.

Since the „monitor with the white cone“ was discontinued, the prices for spare parts have skyrocketed and the parts themselves have become increasingly difficult to obtain. Avantone Pro have developed an almost exact replica of the original drivers. Years of experience and global resources have enabled the parts to be reproduced in great detail and the materials used to be selected to meet modern production and environmental standards.

The AV10-MHF tweeter cone went through a complex development process with phenolic resin treatment to achieve the same measurement curve as the original. The AV10-MLF woofer consists of specially manufactured components that also correspond to the original. To achieve the same strength and weight as the original, Avantone Pro worked with one of the original manufacturers. The new, pressed cone allows for a more precise matching than the original, meaning that matched speaker pairs can now be offered for the first time!

Good to know: Avantone Pro CLA-10 Passive

- Passive loudspeaker with closed housing.
- Detailed reincarnation of the legendary „white cone“ studio speaker (Yamaha NS-10M). So precise that the drivers can be used as spare parts for old original devices.
- Very mid-range-emphasized sound.
- “If a mix sounds good on the Yamaha NS-10M, it will work everywhere“ - that‘s more or less the original quote if you ask engineers.
- Has been the standard in nearfield monitoring in large studios since the 1980s.
- The original loudspeaker started out as a hi-fi speaker.

Watch video [2]

PSI Audio A21-M

www.psiaudio.swiss

After the A14-M and the A17-M, the A21-M is the third studio monitor from PSI Audio to be equipped with the in-house tweeter. At the same time, it is one of the most traditional loudspeakers in the PSI Audio portfolio: Originally developed for Studer and continuously updated over the years, it enjoys enduring popularity in the broadcast sector as well as in music production and mixing applications. From Hip-Hop and EDM producers to electronic pioneer Boris Blank (Yello), the powerful two-way loudspeaker enables producers and sound engineers from all over the world to deliver top performances.

A21-M: reliable partner in close and midfield applications

Monitors from PSI Audio enjoy an excellent reputation among professional sound creators. Like the other PSI Audio models, the two-way monitor A21-M is also valued for its highest sound fidelity in all types of mixing and mastering environments. With the new tweeter, the largest two-way loudspeaker in PSI Audio‘s portfolio comes even closer to the goal of sonic perfection. In addition, the revised version now also features the Flow Guide introduced in the A23-M and A25-M models. As one of the most powerful two-way loudspeakers on the market, the A21-M ensures faithful reproduction of the source material at all times and reveals every detail of complex sound spheres to the trained ear of discerning listeners without losing sight of the bigger picture. You can‘t get any closer to a three-way system with just two drivers.

Good to know: PSI Audio A21-M

- Active 2-way reference studio monitor in a bass reflex housing.
- 100% analogue construction, handmade in Switzerland.
- Designed for a long service life of several decades.
- Each individual loudspeaker is measured and calibrated in an anechoic chamber.
- Electronically and structurally phase-corrected drivers for the best impulse response and ideal spatial depth and stereo field localization.
- Adaptive output impedance to specifically control the woofer‘s resonance behavior (tighter bass, less masking effects).
- Class G/H power amplifiers for particularly low noise behavior.

Watch video [3]

[2] https://www.youtube.com/watch?v=K_Dg7lLIW7w; [3] https://youtu.be/KROJ4pHfXfI?feature=shared

INSEPA

ARABLE

thomann

8 headphones for studio sound

ADAM Audio
H200

Beat NICE PRICE 01/2025

Agood 5 years after the SP5, the renowned Berlin audio manufacturer is launching its second pair of headphones. The H200 is a closed, circumaural headphone with strong insulation in both directions. You can also use it for recording without the playback being recorded. On the other hand, external noise is effectively shielded, making the compact headphones ideal for mobile use. With a low impedance, the H200 sounds loud and powerful even on a smartphone or tablet.

The simple packaging, which does not contain any plastic, is commendable. And the cable is plugged into the headphones via a standard mini jack, so it can be easily replaced if it breaks. A positive aspect is that you can choose whether you attach the cable to the left or right. The relatively strong contact pressure is particularly beneficial when recording on the move, as nothing slips even with vigorous movements.

In terms of sound, the H200 impresses with a powerful but clean and contoured bass down to fairly low ranges. The highs are also very pronounced, so details can be heard well. The H200 therefore cuts a really good figure, especially with electronic music with little or no vocals. The upper mids are also very present, which is why rockier music with distorted guitars is also a lot of fun. However, this tuning comes at the expense of the lower mids. Vocals and natural instruments lack a little warmth as a result, and with more complex songs this range seems a little opaque and compressed. If this is important to you, you should also try alternatives from other manufacturers.

However, there is no alternative in this price range to a special feature of the H200, which can also correct the weaknesses in the mids mentioned above. It is called Headphone Utility and is correction software that is integrated into the DAW as a plug-in. ADAM Audio has already integrated such software into its range in the A series of studio monitors, there from Sonarworks, this time developed in-house by Sonnox. In the plug-in you can adjust the sound curve to the material of the ear cups, which are available in velour as an alternative to imitation leather. In the plug-in you can also activate gain compensation for even volume and to protect your ears from peaks that are too loud. Externalisation ensures a more natural sound via crossfeed. This means that the signals on the H200 no longer reach the left and right ears strictly separately, but rather, as when listening via loudspeakers, each ear also hears a little audio from the other stereo channel. And finally, there is the choice between two so-called voicings: Pure aims to offer the most neutral possible tuning for mixing and mastering, while Uniform Natural Response with its smiley frequency curve can make enjoying music more fun. But that is always a question of personal taste, and the possibility of customization is definitely an advantage.

Verdict

For a relatively low price of €159, the closed headphones really offer a lot. A firm fit combined with very good shielding make the H200 ideal both as a universal headphone in the studio and for mobile use. In both cases, the headphones deliver clean and powerful bass, detailed highs and a very present upper mids. Slight weaknesses in the wider mid-range can be compensated for a little with the free correction plug-in, and this headphone utility also enables a more natural sound thanks to adjustable crossfeed. All in all, a great package!

Web: www.adam-audio.com
Price: 159 Euro
Rating:

Beat MUST-HAVE 01/2025

Beyerdynamic
DT 770 PRO X Limited Edition

To mark the 100th anniversary, Beyerdynamic has launched the limited special edition of the legendary DT 770 PRO. The DT 770 PRO X Limited Edition remains true to the familiar sound and combines it with exciting innovations that catapult the classic into the current decade. The elegant design is immediately noticeable: the name in silver adorns the housing covers. The workmanship quality is as high as usual, with robust metal elements and a flexible headband made of spring steel. Wearing comfort is excellent thanks to the memory foam and velour cover - ideal for long listening sessions without feeling pressure.

The new STELLAR.45 drivers deliver a balanced, detailed sound reproduction. Accentuated highs ensure clear speech intelligibility, while the powerful bass does not overdrive. The mids are restrained but present, and the spatial imaging is appropriate for closed headphones. The drivers remain distortion-free even at high volumes.

The detachable cable with mini XLR connector offers flexibility, ideal for mobile use. With 48 ohm impedance, it works on smartphones and other devices. The DT 770 PRO X is perfect for musicians, producers, podcasters and streamers - in the studio and on the go.

Verdict

The Beyerdynamic DT 770 PRO X Limited Edition impresses with its modern interpretation of a classic. With a balanced sound for extended listening pleasure and high-quality features such as the STELLAR.45 drivers and detachable cable, it offers everything that musicians and audiophiles could wish for. For a price of 199 euros, you get a piece of high-end history with contemporary improvements.

Web: www.beyerdynamic.com
Price: 199 Euro
Rating:

Technics
EAH-A800

The Technics EAH-A800 circumaural headphones have a 40mm membrane with plenty of space to vibrate and an additional cavity to further improve the sound. Its balanced sound without exaggerated emphasis on individual frequencies makes it attractive for music lovers and producers alike. Spatial reverb effects and stereo delays can be precisely located, while depth layering and transient reproduction are in the top league of mobile headphones. Thanks to the LDAC codec, the sound quality is maintained even when connected via Bluetooth. Technics has integrated an impressive ANC system that effectively suppresses annoying outside noises while allowing important ambient noises in traffic to pass through if desired. The free app allows extensive adjustments to the ANC and the sound characteristics via an equalizer. Practical! With a remarkable battery life of 40 hours with active ANC, the EAH-A800 is ideal for mobile use. Built-in microphones also ensure good voice quality when making phone calls. The headphones sit comfortably on the head and combine stylish design with functional comfort.

Verdict

The EAH-A800 not only looks very stylish, but also sits comfortably on the head. The sound also impressed us immediately in the test: the headphones sound detailed and balanced, allowing you to produce and evaluate your own tracks and mixes in addition to pure music enjoyment. And the extensively adjustable active noise cancellation is a real blessing when you're out and about in noisy environments, as is the very long battery life.

Web: www.technics.de
Price: 243 Euro
Rating:

IK Multimedia
ARC Studio

ARC stands for Acoustic Room Correction. To ensure the most authentic playback possible, the ARC4 software can analyze the acoustic weaknesses of the room in interaction with the speakers and compensate for them by adjusting the frequency response and phase, which now also works via hardware without a plug-in. The software uses your studio monitors and a supplied microphone to measure the room and then correct the frequency response and phase. A significant upgrade over the previous version is the hardware processor that is connected between the sound card and the monitor speakers. This solution makes it possible to correct all audio signals sent to the speakers, including those played outside the DAW.

With the ARC Studio, you can carry out the correction process very easily. After a 15-minute calibration with the microphone, the correction curve is loaded onto the processor, which then works independently. The sound improvements are significant: bass sounds more defined, and highs and mids become more transparent. The results are particularly impressive in acoustically difficult rooms.

Verdict

Although software cannot completely replace the acoustic optimization of a room through insulation etc., it can still be helpful. And in the new version 4, the Acoustic Room Correction system not only improves the sound, but also allows for more individual adjustment. The highlight, however, is the uncomplicated integration via hardware in the signal path directly in front of the speakers: once set up properly, you don't have to worry about anything else.

Web: www.ikmultimedia.de
Price: 287 Euro
Rating:

Beyerdynamic
MMX 300 Pro

The Beyerdynamic MMX 300 Pro headset offers versatile applications in music and video production as well as gaming and media consumption. By combining the proven sound quality of the DT-770 Pro with a high-quality condenser microphone, it meets the needs of users who want to use both space and money efficiently.

The sound is typical Beyerdynamic: rich bass, detailed highs and a large spatial sound image. The condenser microphone with a frequency range of 20 to 20,000 Hz is not only suitable for gamer communication, but also for recording vocal ideas or video soundtracks. It is still advisable to use a low-pass filter in the DAW to minimize popping sounds and deeper interference signals.

The MMX 300 Pro is robustly built and has a professional-looking black design. The cable and ear pads are easy to replace, although the hard transport case of the predecessor is missing. The design can be personalized. The headset is extremely comfortable to wear: it offers enough contact pressure to sit securely while remaining comfortable even during longer use.

Verdict

The Beyerdynamic MMX 300 Pro is a high-quality headset that scores points for its versatility. Whether for use in the studio or for gaming, it impresses with its durability, comfortable fit and pleasant sound. With a price of 299 euros, it is an excellent choice for anyone looking for a combined device with good audio quality. The MMX 300 Pro offers great performance in an elegant package that meets both practical and aesthetic requirements.

Web: www.beyerdynamic.com
Price: 299 Euro
Rating:

8 headphones for studio sound

Sennheiser
HD 490 Pro

The Sennheiser HD 490 Pro is an open studio headphone that impresses with both sound quality and comfort. With a price that is below the HD 600 and HD 660 models, it becomes an attractive option for desktop studios. The interchangeable ear pads, which are available in both velour and textile, are particularly impressive. These not only allow for individual adjustments in terms of comfort, but also subtle variations in sound. The flexible cable connection, which can be attached to either the left or right, is particularly practical in less than ideally set up studios. The design is professional and robust, although Sennheiser relies heavily on plastic. The HD 490 Pro offers a balanced sound with transparent and detailed highs, a dry bass and well-tuned mids. The open design ensures a realistic spatial representation, although it is less suitable for noisy environments. The differences between the ear pads are audible: Velour offers a warmer sound, while textile provides a more analytical sound. The headphones unfold their full potential with a high-quality headphone amplifier, but also show decent performance on mobile devices such as the iPad.

Verdict

High wearing comfort, alternative ear pads, well thought-out cable routing and a pleasantly balanced sound: the HD 490 Pro is an all-round successful open studio headphone at a comparatively low price! In terms of sound and comfort, the HD 490 Pro sets standards in its price range and is a convincing reliable partner in the studio.

Web: www.sennheiser.com
Price: 389 Euro
Rating:

Audeze
MM-100

The Audeze MM-100 headphones offer impressive sound quality for audiophiles at a fraction of the price of higher-end models. Despite the cost-effectiveness, no expense has been spared on the key technologies that have made the US manufacturer's headphones famous around the world. We're talking about the magnetostatic sound transducers, which enable particularly precise and clear sound reproduction thanks to their special membrane technology.

Handcrafted and equipped with the company's own patented technologies such as the Ultra Thin Uniforce membrane and the Fazor Waveguides, the MM-100 uses an open design that covers a frequency range of 5 Hz to 25 kHz. The neodymium magnets used and the 90 mm membrane ensure superior, unadorned sound reproduction.

The MM-100 impresses with its excellent impulse response and detailed resolution. Its practical, tonal tuning with reasonable presence enhancement makes it an ideal tool for mixing and mastering tasks. The headphones also score points with their high wearing comfort and very good workmanship, making them ideal for longer sessions.

Verdict

The Audeze MM-100 is a hot tip for price-conscious sound creators with high demands on playback quality. While the housing is based on the design of the Maxwell gaming headphones, there are no compromises in terms of robustness and comfort. Only the lack of a 3.5 mm connection could be a small limitation for some users. With a price of under 500 euros, these headphones are almost unbeatable in the magnetostat range.

Web: www.audeze.com | www.megaaudio.de
Price: 475 Euro
Rating:

Fostex
TH808

PREVIEW

The Fostex TH808 is based on the open design principle, which is intended to ensure a transparent sound. The housing shells are made of black walnut, which makes each headphone unique due to its grain. They are complemented by metal grilles that minimize resonances. The headband and ear pads are covered with synthetic leather, which ensures comfort even during longer listening sessions. With a weight of 370 grams, the TH808 is pleasantly light to wear. The headphones come with a three-meter copper cable that enables low-loss transmission. Fostex also offers an optional balanced cable. The dynamic drivers of the TH808 use magnets with a flux density of 1.5 Tesla and 50mm membranes made of Biodyna material. This material is intended to support a fast response and precise impulse reproduction.

In the test lab, the TH808 showed a balanced frequency response with a subtle presence dip. At higher levels, slight distortions were observed, which disappeared when the volume was reduced. The open design allows for good environmental perception, while high frequencies are dampened.

The headphones bring out sound nuances precisely and are suitable for various styles of music thanks to their warm tuning.

Outlook

Overall, the Fostex TH808 offers a combination of precise sound, first-class workmanship and comfort and represents an interesting option for music lovers. In the next issue, we will test the headphones in detail.

Web: www.fostex.jp/en/ | www.megaaudio.de
Price: 1.499 Euro

Test: Focal Lensys Professional

The French company Focal has built up a good reputation in the studio sector, especially with its studio monitors, but also the open headphones Clear MG Professional impressed us in the test. That's why we were very excited about Lensys Professional, the new closed headphones from Focal.

After unpacking the headphones, which are delivered in a stylish carrying case, the slightly futuristic design and high-quality workmanship with lots of metal in important places such as the joint and ear cup connection are striking - there is nothing to complain about here. In addition to a spiral cable with 3.5 mm plugs and an adapter to a 6.3 mm jack, another shorter cable with a small jack on both sides is supplied.

It was therefore a good idea to plug the short cable directly into the headphones on one side (unfortunately not lockable, but with a firm fit) and into the smartphone on the other side to get a first hearing impression before the professional hearing test in the studio.

Comfortable and well insulated

What was immediately noticeable was the loud sound due to the very low impedance of 26 ohms. The strong insulation from outside noise was also unmistakable. This makes the headphones also recommended for mobile use, for example if you want to enjoy a long train journey with really good sound from your phone or tablet. Especially since Lensys is more compact than most competing models and doesn't take up much space when folded up in the carrying case. The headphones are not particularly heavy at around 300 grams and, as mentioned, not that big. They sit firmly on the head, and thanks to a strong but not too strong contact pressure, they don't slip easily from their optimal position even when you move. The external insulation is excellent, so they can also be used as recording headphones without any problems.

Excellent treble reproduction

Focal specifies the transmission range from 5 to 22000 Hz at ±3 dB. We were therefore particularly excited about the treble reproduction. Our main monitors in the desktop studio are also from Focal, because in addition to the dry, contoured bass, the French company scores points with an almost unrivalled treble reproduction - detailed and high-resolution, but not too sharp, pointed or intrusive. With the Clear MG Profession, the treble was a bit more covered, but Lensys again makes full use of this Focal strength. You hear every tiny crackle, distortion or other noise, every reverberation chamber, every quiet hi-hat perfectly placed in the room. Even with one of our reference albums in this area, Trentemöller's "Last Resort", we were able to hear more hidden subtleties. In addition, there is a tight and quite pronounced bass range, so that even modern bass-heavy music can be easily assessed via the headphones.

The headphones can be folded up to save space and a compact bag for transport is included.

Produce and listen

Focal has found a good compromise here between a super-linear and purely analytical tuning and a sound that is also suitable for listening to and enjoying music. In addition, the headphones sound consistently homogeneous both quietly and when turned up really loud.

Lensys mercilessly exposes bad mixes, especially with exaggerated highs or clipping. Really good mixes, on the other hand, are a pleasure, also because of the flawless reproduction of transients and impulses. You only have to make small compromises in the mids. If you prefer it warm and round with a certain tape feel, especially with vocals and acoustic instruments, Lensys may be a bit too clear and sober for you in this area.

Verdict

Focal once again manages to bridge the gap between high-quality HiFi headphones and professional studio headphones. In the studio, thanks to the excellent treble reproduction, you can hear every detail, identify errors and clipping, or perfectly dose and place the reverb. And the bass range is not neglected either, but is not overemphasized, but rather powerful, dry and precise. In combination with the strong external insulation, you can also use the headphones for recordings, or on the go.

The workmanship and wearing comfort are also very good, and we also liked the compact shape and the relatively low weight. An all-round successful closed headphone at a fair price!

More info

Features

- Studio headphones
- closed
- circumaural
- ear pads made of memory foam
- dynamic
- 40mm aluminum-magnesium dome
- impedance: 26 ohms
- frequency range: 5 - 22,000 Hz
- weight: 306 g

Facts

Manufacturer: Focal
Web: www.focal.com
Distribution: Sound Service
Price: 699 Euro

- ▲ Very detailed highs
- ▲ Powerful, contoured bass
- ▲ High impulse fidelity
- ▲ High external insulation
- ▲ Very good workmanship
- ▲ Firm, comfortable fit
- ▲ Compact and portable

Workmanship:
Sound:
Price/perf.:
Total:

Alternatives

Neumann NDH-20
479 Euro
www.neumann.com

Audeze LCD-2 Closed
999 Euro
www.audeze.com

Austrian Audio Hi-X60
315 Euro
www.austrian.audio

Hands-on: For these reasons, work with headphones!

10 tips for headphone mixing

When it comes to accurately judging a mix, nothing beats high-end monitoring in a room acoustically optimized by experts. But if you don't have such ideal conditions or simply want to use headphones as a second monitor, high-quality headphones definitely offer advantages when mixing and mastering music.

1 No trouble with the neighbors

Not all of us have a studio where you can turn up the speakers properly at night. And at 3 o'clock at night, I'm sure your neighbors don't really care if your snare is banging properly either. Luckily for the neighbors, there are headphones so you can always play music when the muse is kissing you.

2 No background noise

Another benefit of headphones is that they minimize distracting background noise. This is a great advantage if your studio isn't in the quietest environment or the neighbor is mowing the lawn while you work on your next hit.

3 Magnifying glass for audio signals

High-quality headphones show their strengths especially when looking for background noise, recognizing clicks or clipping in vocal or instrument recordings or when assessing hiss. Sound details such as instruments and sounds playing in the background as well as reverb tails can also be better assessed with good headphones.

4 Mobility

With headphones, you can mix your music anywhere, anytime. Whether it's on the balcony in the sun, in the rehearsal room while your bandmates are talking, or in the hotel, on the train, or on the plane.

5 Familiar sound reference

If you are familiar with the sound of your headphones, you know exactly how well-produced music should sound on them. Compared to studio monitors in an acoustically less than optimal room, good headphones often provide more consistent sound.

6 Optimize frequency response

In many cases, even high-quality studio headphones do not have a completely linear frequency response. For example, the bass range is often slightly emphasized for a particularly voluminous sound. Software such as Waves Nx Virtual Mix Room, Sonarworks SoundID Reference, or Toneboosters Morphit can help the headphone model of your choice achieve a more balanced frequency curve so you can better evaluate mixes.

7 Simulate monitoring systems

In recent years, several manufacturers have released plug-ins that simulate the sound of various monitoring systems. One example is **Audified MixChecker Pro**, which recreates over 60 different

monitoring environments, from smartphone and laptop speakers to vintage studio monitors. With good headphones, you can hear directly how your mix translates to different systems.

8 Distorted stereo imaging

When you switch between studio monitors and your headphones, you'll notice that the stereo image sounds much wider on the latter. And sounds that you have placed in the stereo center sound as if they are not in front of you, but directly in your head. Crossfeed plug-ins like Goodhertz CanOpener Studio provide a more realistic stereo image with headphones and can make mixing much easier.

9 Do not listen too loudly!

At high volumes, your hearing not only tires more quickly, but there is also a risk of permanently damaging your ears. So it's even more important than when working with studio monitors to take regular breaks. And when you listen quietly, it's easier to determine whether all the sounds blend into a homogeneous mix and whether all the important sounds and instruments are audible even at low volumes.

10 Switching recommended!

It is advisable not to rely solely on headphones when mixing and mastering, but to switch between studio monitors and headphones regularly. This way you can ensure that your mix transfers to different monitoring systems in the best possible way. Additionally, it's a good idea to listen to your music on other speakers such as cell phones, TVs, hi-fi systems, Bluetooth speakers, or in your car. This comparison will allow you to identify and correct potential weaknesses in your mix.

Portacapture X6
2 × XLR, 4+2 audio tracks, up to 96 kHz

32-bit FLOAT

Portacapture X8
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TASCAM

Monitor stands from K&M

Inclination towards music

When it comes to stands for microphones and monitor boxes, there are few that are more stable and of higher quality than König and Meyer. The traditional German manufacturer has a few new stands for studio monitors in its range for professionals and home recorders. All four models offer the resilience and durability that you would expect from the manufacturer.

Tiltable tripods for table and floor

The monitor plates of models 26776 and 26754 can be tilted up to 12.5 degrees. Depending on the space required, desk height, body size and position of the desk chair, the positions of both studio monitors can be adjusted individually. The smaller 26776 monitor table stand can support up to 25 kilograms and even fits massive seven-inch bolides.

And thanks to the 4-point support attached to the base plate, the monitors are decoupled well enough to prevent the desk from vibrating unnecessarily. In addition to the inclination, each tripod can be adjusted in four steps between 35 and 45 centimeters in height. The same inclination comes into play with the larger floor tripod 26754.

Here, up to 35 kilograms can be held per tripod, thanks to the stable metal base with 3-point support, particularly wobble-free at a height between 80 and 130 centimeters. Both models come with a stop bar on the head plate, which prevents the expensive monitor from slipping at tilt angles.

Table stands for small recording setups

Most home producers produce in environments where large studio tables in even larger, decoupled rooms are an absolute dream. So where do you put the studio monitors, how do you create a listening situation in the corner of the desk? The first thing you do is think practically and put the speakers on the table. This quickly causes two problems.

For one thing, desks are rarely high enough for the monitors to shine directly at head height. This creates a listening situation in which you cannot assess either the stereo panorama or the frequency spectrum. For another, the speakers transmit vibrations into the wood of the desk, and the sound reflects off the desk top. Table stands such as the models 26772 and 26774 from König and Meyer are the solution.

Both can support studio monitors weighing up to 15 kilograms and can be continuously adjusted between 16.7 and 25.5 centimeters in height. The two stands only differ in their size: the model 26772 comes with a mounting plate measuring 150 by 170 millimeters, while the larger model comes with a plate measuring 230 by 250 millimeters.

König & Meyer 26754 Monitor stand
Price: 187 Euro RRP

König & Meyer 26776 Tiltable monitor table stand
Price: 109 Euro RRP

König & Meyer 26772 Monitor table stand
Price: 61 Euro RRPs

König & Meyer 26774 Monitor table stand
Price: 95,90 Euro RRP

MORE INFO

You can find these and many other tripod solutions for musicians and producers on the König & Meyer website: www.k-m.de

Focus and feel

ableton.com/push

Discovered: Victoria

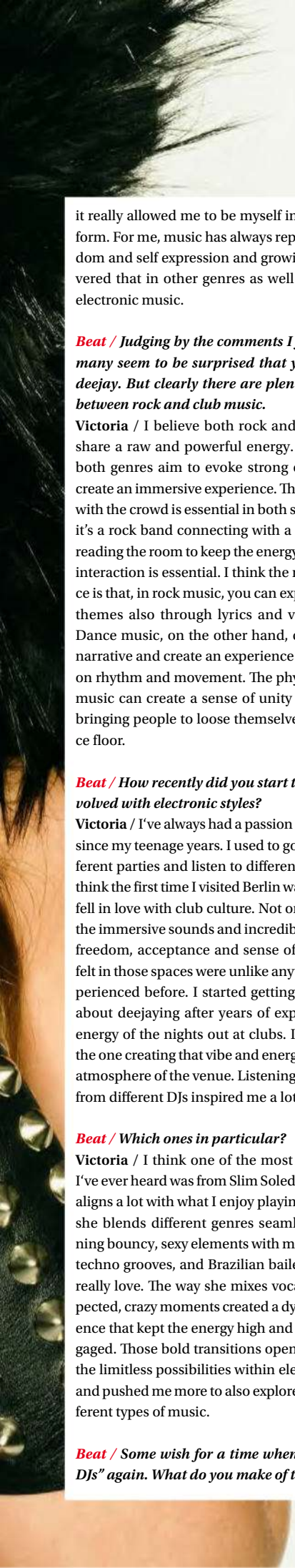
Raw Energy

» I don't want to fit into a specific box or seek validation from purists. «

For Victoria de Angelis, deejaying is not just another trophy to add to her collection. It is not only the fresh and fascinating form of creativity which allows her to express her artistic personality. Her DJ sets, both solo or in collaboration with established turntable wizards like Partiboi69, demonstrate how naturally she has transitioned to the turntables. Deejaying allows her not just to discover – but to actually surprise and re-invent - herself every single night. by Tobias Fischer

***Beat /** According to scientific studies, we make our deepest and most incisive musical experiences between the ages of 13-16. Would you say that holds true for you as well?*

Victoria / I agree, that age, especially in music, was such a big and defining part of who I was. I was just more into rock 'n' roll at that time, and I was playing bass or guitar in many different little bands. The part I loved the most was creating something that was mine, writing my own music, and developing a stage persona. It felt like a form of bold self-expression. Especially as a young girl



it really allowed me to be myself in a more crazy form. For me, music has always represented freedom and self expression and growing up I discovered that in other genres as well - particularly electronic music.

Beat / Judging by the comments I found online, many seem to be surprised that you started to deejay. But clearly there are plenty of overlaps between rock and club music.
Victoria / I believe both rock and dance music share a raw and powerful energy. At their core, both genres aim to evoke strong emotions and create an immersive experience. The engagement with the crowd is essential in both styles, whether it's a rock band connecting with a crowd or a DJ reading the room to keep the energy flowing - that interaction is essential. I think the main difference is that, in rock music, you can explore different themes also through lyrics and vocal delivery. Dance music, on the other hand, can transcend narrative and create an experience focused more on rhythm and movement. The physicality of the music can create a sense of unity and freedom, bringing people to loose themselves on the dance floor.

Beat / How recently did you start to get more involved with electronic styles?
Victoria / I've always had a passion for club music since my teenage years. I used to go to a lot of different parties and listen to different genres. But I think the first time I visited Berlin was when I truly fell in love with club culture. Not only because of the immersive sounds and incredible DJs, but the freedom, acceptance and sense of community I felt in those spaces were unlike anything I had experienced before. I started getting more serious about deejaying after years of experiencing the energy of the nights out at clubs. I wanted to be the one creating that vibe and energy, shaping the atmosphere of the venue. Listening to insane sets from different DJs inspired me a lot.

Beat / Which ones in particular?
Victoria / I think one of the most inspiring sets I've ever heard was from Slim Soledad. Her sound aligns a lot with what I enjoy playing. I loved how she blends different genres seamlessly, combining bouncy, sexy elements with more aggressive techno grooves, and Brazilian baile funk which I really love. The way she mixes vocals with unexpected, crazy moments created a dynamic experience that kept the energy high and the crowd engaged. Those bold transitions opened my eyes to the limitless possibilities within electronic music and pushed me more to also explore, and mix, different types of music.

Beat / Some wish for a time when "DJs are just DJs" again. What do you make of that?
Victoria / I find it a bit narrow-minded to engage in discussions that pit different roles in music against each other. I think music is beautiful because it's accessible to everyone, and it allows people to express themselves in countless different ways. I think Instead of trying to put others down, we should celebrate the creativity that comes from various backgrounds. If someone doesn't resonate with a particular style or artist, they can simply choose to avoid that music.

Beat / What do you think your background as a bassist and songwriter brings to the table?
Victoria / Personally I think my background as a bassist and songwriter enriches my work as a producer and DJ. Not coming only from this background I think I have a very free approach to it that allows me to explore different soundscapes and mix different genres in a way that doesn't have to follow any rules or schemes. I don't want to fit into a specific box or seek validation from purists. What excites me is the freedom to experiment and innovate, creating something that's unique and original.

Beat / You recently released your first solo single with Anitta. Was writing a club track substantially different than writing a good song?
Victoria / I think the key difference was the scope of my role. In the band, I mainly focused on writing the bass part, while this time, I had the challenge of creating a part for every instrument, completely structuring the track from zero. This shift was challenging but also super inspiring, as it allowed me to explore my creative freedom in ways I hadn't before. I really enjoyed digging into different sounds to shape my identity as a solo artist.

Beat / Wenn man Disco mit elektronischen Mitteln am Computer nachbaut, was geht dabei verloren, was gewinnt man?
Victoria / I believe that while creating disco through electronic means on a computer can certainly open up new possibilities, there's something irreplaceable that comes from live music. When you have musicians playing analogue instruments together, you can really feel their humanity in the performance. Each note they play carries slight imperfections and nuances that add depth and character, there's an incredible chemistry and the interplay creates an energy that's palpable and unique to each gig. It's that human element, the way they feed off each other's energy that brings something truly special to the music.

Beat / So was it ever a consideration to play bass on the track? I could imagine that this kind of fusion could turn out really interesting!
Victoria / I also think it could be really cool! I'll definitely do it at some point.

Beat / When you're deejaying, you're spinning other people's records and not your own tracks. How do these two experiences compare?
Victoria / I think that's the biggest difference for me. When I'm deejaying, I love the fact that I can discover new records every single day, it keeps things exciting and never repetitive. Each set is completely different and I can improvise based on the energy from the crowd. It's a dynamic experience, you still create your own sound but not only by making your own music but also in the way you mix and select tracks. With the band, since you almost play the same set every night, I think the majority of the energy comes from the connection and engagement with the crowd. In deejaying, not knowing what you are gonna play, you can even surprise yourself.

Beat / How do you feel about back-to-back DJing?
Victoria / For me there's something really special about collaborating in music in general. I think that sharing such a unique emotional journey really creates a special bond between people. I thrive on learning from others and the energy that comes from creating something cool together. In b2b sets especially, each DJ has their own sound and style and it's really inspiring to blend those different influences. It's all about weaving our sounds into something unique that we could never have created alone. Also you can really hype each other up and have so much fun, it almost feels as you are partying with a friend. Sometimes you create a connection where it feels like it's only you two in the room, and it's so exciting to see the other's reactions, to surprise each other playing something completely unexpected, or feeling the excitement when a track you didn't know goes perfectly with the one you are playing.

Beat / You and Partiboi certainly make for a very natural team ...
Victoria / I think we really have a special connection! We didn't plan anything in detail, everything was improvised. We really enjoyed the moment and fed off each other's vibes. We had a lot of similar nuances in our sound, so it felt like a perfect match.

Beat / No negative feedback about the rock star who also wants to deejay so far?
Victoria / In my experience, I've really felt the sense of community in DJ culture. Everyone I've worked with has been so sweet and open. I think it's really important to support each other rather than competing against one another. Collaboration transforms the process into a shared experience, making the music even more powerful.

www.instagram.com/vicdeangelis/

Portrait: Defset

Grief processing in the experimental laboratory

With Defset, we want to introduce an exciting newcomer. In our interview, the London-based electronic artist gives us insights into his sound universe, which spans influences from Deep House and Dubstep to Electronica and Tech House. In the conversation, he talks about his passion for modular synthesizers, field recording, and sampling. His music, often instrumental and rich in sonic details, consciously breaks genre boundaries and engages with new technologies like artificial intelligence, while still incorporating classic instruments and vintage equipment. He also uses music to process profound personal experiences, such as the loss of his mother, and gives us a deep insight into the emotional themes of his current album "Ok, Accept, Continue". Interview: Sascha Blach

Beat / How did you get into music and how long have you been active?
Defset / I got into making music on an Atari ST in the early 1990s. I've been releasing music under various names and labels since then.

Beat / Your music is difficult to grasp and impossible to categorize. How would you describe it to an outsider?
Defset / I don't consciously go about making music that is difficult to categorize. My inspiration comes from so many different places, and I just make what I want to make. I tend not to describe all of my music in a few words, but begrudgingly, I guess I would have to say IDM, as much as I hate that term, as it implies that other "dance" music is not intelligent.

Beat / Do you consciously break out of genre boundaries or does that happen naturally when you make music?
Defset / A bit of both. I've tried to make music that fits into genres, but I don't enjoy it. It is limiting. Genres are only there as a tool to assist in the commodification of music, so I resist them consciously. Making clearly defined genre-based music is an art which I don't possess, but it is a derivative art. I tried to stop being derivative about 10 years ago. I still flirt with genre. "Content _01" is an Acid House EP, for example. The "Content _" series of EPs are where I do my more genre-based work... but they still don't sit perfectly within distinct genres.

Beat / And what about music theory rules? Do you consciously break them to challenge the listener?
Defset / Ha! No! But I suppose I don't adhere to them either. I enjoy making music because I enjoy exploring sounds and how those unique sounds blend with each other to evoke a response. I love musical, melodic music, but it doesn't satisfy my experimental urge to follow rules. I suppose subconsciously I'm always looking to push things to breaking point, and that might mean the rules of Western musical theory too.

Beat / I read interesting keywords in the info like modular synthesis, vintage gear, pedals, live instrumentation, creative sampling, data bending, and machine learning tools. What exactly does your production process look like?
Defset / I usually develop a process for each project. I created a project recently purely from elements of databent audio glitches. My first album, "Proximity", was modular and hardware synths, recordings of live jams, taken into the digital realm and edited. This new album was created from sketches made in the box. I then took those elements, replayed them, or put them through pedals, essentially bringing the music back into the analo-

» I suppose subconsciously I'm always looking to push things to breaking point. «

gue world. Then I replaced drum sounds with live drum hits or snippets of field recordings. So the reverse of my process on "Proximity" really.

Beat / What were your favorite modular tools?
Defset / My go-to is always the Intellijel Metropolis and Atlantis. They sound so good for little stabs, weird hits, or full melodies and bass lines. I also use the Noise Engineering BIA a lot.

Beat / And what about your relationship with vintage equipment?
Defset / ITToday I'm less of a vintage head than I was. I'm more excited about new ways of creating sound. I did collect a few lovely bits but sold lots during a house move. I really regret it and have vowed never to sell gear again! The problem with vintage is that it's expensive, often costs a lot to maintain, and I find the sounds I'm looking for are usually the noisy circuitry, which I can achieve through pedals. So, although I'm always looking for classics, I'd rather spend money on a new pedal or forward-thinking synth like the stuff coming from Soma Labs.

Beat / How do you go about sampling? What do you prefer to sample?
Defset / I sample anything that makes a sound. The tech available to us now means we don't need bulky equipment to record things wherever we are. On "Wisdom", I put my water bottle on the table and it made this amazing pitch-modulated bell-like sound. I sampled it, tuned it, and used it throughout the track. I often sample my voice or breath. I'm a drummer, so I sample my own drum loops, feed them through pedals, and cut them up. I also carry around my Tascam field recorder and take field recordings of all sorts of things, then sample tiny sections to use as drum hits or effects. I do also use Splice. I'm not against sample libraries, they can be really helpful, but I try not to use a sample straight without morphing it into my own thing. It's all about being surprised with exploration. I want to be the audience and the producer.

Beat / Machine learning is another keyword related to your art... does that mean you use AI tools? What is your general opinion on the current rapid development of AI?
Defset / I'm studying at UAL at the moment, doing a Master's in Music Production. My final major project is on whether AI can be collaborated with to enhance our creative output rather than used to replace humans in music. It's opened up a really interesting world. In particular, a company called Audialab has created an agent called Deep Sampler 2. It is a text-to-audio sampler. It doesn't create whole songs of rubbish like the huge internet-scraping platforms like Suno or Udio, it generates weird and wonderful elements that can be used as part of the creative process. I'm developing a dataset trained on my own music with Audialab, which will be available for people to download. I think this is the next

wave of sound synthesis. We need to support small, independent developers like this and embrace the technology. Push it to the extremes and be creative with it. Otherwise, we will be consumed by multinational corporations who want to use AI unethically to replace humans and increase profits by removing the producers from the equation.

Beat / What does your production setup look like? Do you prefer to work analogue or digitally?
Defset / I always end up in the box. My final mixes are digital. Sometimes I start analogue and end digital, sometimes I start digital, go analogue, then back to digital. The mixing and mastering power of digital systems now is so great and relatively cheap in comparison to analogue systems that mixing and mastering in analogue just isn't viable.

Beat / You also have a background in film production. Does this visual thinking also help you in producing music?
Defset / I suppose it does. I worked on the VFX for films like "Harry Potter", "Gravity", and "The Hobbit". I think working in those environments gave me experience in how to organize big projects and how to develop processes, but more conceptually, it may have subconsciously driven me to make more epic, cinematic music. I often visualize the music I'm making.

Beat / To what other extent does digital art flow into your work?
Defset / I'm inspired by all kinds of art, from sculpture to AI artists like Claire Silver. I work with Liam Painter, a visual artist who uses stop-frame animation to create stunning visuals. He worked on the visualizers for this album. I sculpt in wood too, which is a perfect counterbalance for spending time creating on a computer.

Beat / I also liked the many ethnic and world music elements in your music. Are these samples or do you always collaborate with musicians from all over the world when you have these elements in your music?
Defset / I have collected percussion from around the world and have sampled many of these on this album. I travelled through Senegal and Gambia during the making of the album and took some field recordings (with permission and remuneration) that feature throughout. I collaborated with Jally Kebba Susso on "Kombu". He is an incredible Gambian Griot, a storytelling musician. He plays Kora, Djembe, and sings on the track. I've never collaborated with other musicians before, so this was a first. I felt it was important for this album because of the connection to Gambia.

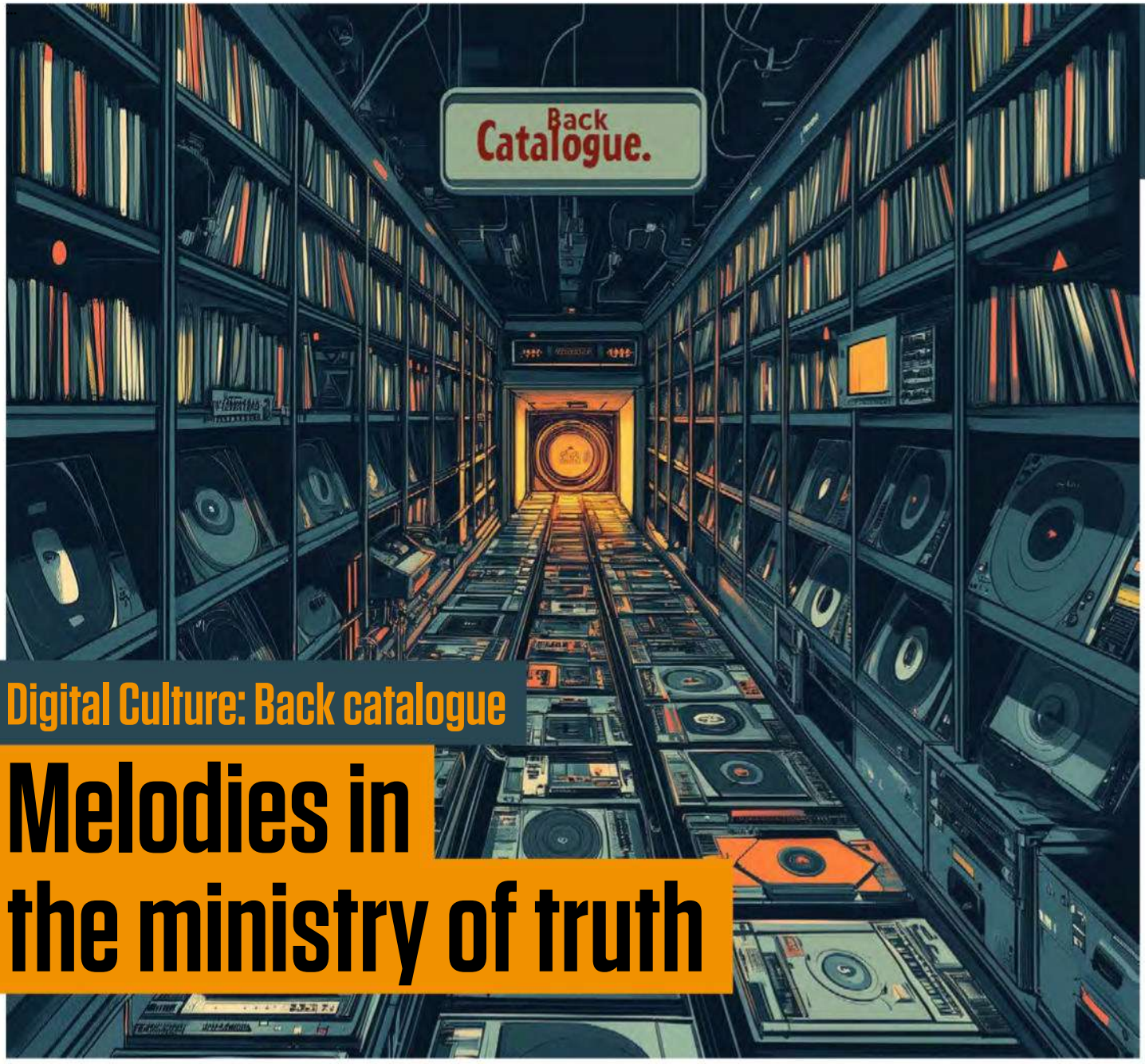
Beat / But the song "Kombu" also has a very personal background, doesn't it?
Defset / My mother lived in Gambia for a while. She ran a charity that supports a school, which I have now taken over as chairperson. It's called The Gambian Children's Fund. We support a tiny school that began with just 40 kids and now has 650 kids enrolled. My mum died in 2021, and I visited Gambia and the school to retrace her steps. The album is a kind of diary entry, with each track symbolizing a stage of the grieving process. "Kombu" is about the warmth of a family and of a mother, and I suppose relates to a more positive and hopeful stage of grief.

Beat / So dealing with grief is the lyrical concept behind "Ok, Accept, Continue"?
Defset / The loss of my mother was the hardest thing I've experienced. She was my best friend. An amazing woman. I miss her so much. But I'm lucky to have had this vehicle to channel my emotions through. But although the album was written around grief, I didn't want it to be all negative and sad. There is hope and celebration of the time shared with a loved one. I looked for the positive actions we can take digitally and found the three main ones to be "Ok," "Accept," and "Continue." The words fit perfectly with the process of grief. At some point, we have to say, "Okay, this has happened, it's awful, it will get better, we have to carry on living." This is the concept behind the whole project.

Beat / What do you have planned for the next few months?
Defset / I'm finishing my studies, which includes a 5-track EP of purely AI-generated music using Deep Sampler 2 by Audialab. It's deeply experimental, exposing the weirdness of AI-generated music. I'm unsure of how I'll release it yet—I think it may be a free download on Bandcamp. After that, I'm focusing on developing a live show, trying to capture my live modular/instrumentation/AI jams into a live act... it will be a challenge!

www.defset.bandcamp.com

The cover of the new album „Ok , Accept, Continue"



Digital Culture: Back catalogue

Melodies in the ministry of truth

Classics, oldies and legends are worth their weight in gold for the music industry. But the hits and stars of the present are even more valuable. And so rights holders are now barricading the vaults to their back catalogue ever more tightly. How far are they prepared to go? by Tobias Fischer

Whoever controls the past controls the future, according to George Orwell in 1984. In the dystopian novel, the Ministry of Truth is working meticulously to constantly adapt the past to current events. The music industry also adhered to this concept for a long time, mercilessly exploiting its so-called „back catalogue". Particularly during the early years of downloads and streaming, there was a pervasive fear that the past could bury the current creative landscape like a tidal wave. In the meantime, the picture has completely changed: With aggressive tactics, the industry is trying to pull the rug out from under its own history, just in time for the fortieth anniversary of the literary classic. The only thing worth promoting is what's currently en vogue – because that's what's filling the coffers. Proof of this theory is the current lawsuit brought by the American industry organisation RIAA against the operators of the Internet Archive, owner of, among others, the WayBack Machine. In it, they accuse the archive and its founder Brewster Kahle of infringing on copyright with their „Great 78" project. [1] The project is a digitisation initiative of epic proportions. A fan of old-fas-

[1] https://www.rollingstone.com/music/music-features/internet-archive-major-label-music-lawsuit-1235105273/

> Whoever controls the past controls the present. And destruction is the strongest form of control. «

hioned shellac records, Kahle started transferring as many of them as possible to his servers. The operation is extremely time-consuming and non-commercial in nature: all digital 78s can be freely played and downloaded from the Internet Archive's site, and include the carefully scanned cover artwork. What, to Kahle, is an act of preservation and remembrance, is an affront to the RIAA. Should the court rule in its favour, the accumulated fines could amount to over $600 million. This would not only put an end to „Great 78" - but also to the Internet Archive as whole.

At first glance, the case seems to demonstrate how important the back catalogue is for the interests of rights holders.

The trial follows a similar case in which book publishers sued the Internet Archive over its digital library and which ended in favour of the publishers. Even then, however, it had become clear that these issues were no longer as clear-cut as they were in the days of Napster and Pirate Bay when the RIAA was imposing horrendous fines on download-happy students. On the one hand, this is due to the fact that copyright has now expired for many old books and sound recordings, despite a considerable increase in terms. On the other hand, the USA has adapted the rules for very old recordings, which makes it possible under certain circumstances to use grey areas without penalty. During the Covid lockdown, the archive illegally extended the rights to use the publications on offer and promptly paid the price. The current process is similar: If Kahle had simply adhered to legal requirements and registered the recordings that were to become part of the 78 project for non-commercial use, the dispute would probably never have arisen.

The legal intricacies resulting from the lawsuit are not particularly exciting, even if friends of the Internet Archive undeniably have a few anxious months ahead of them. What is far more interesting to observe is that a look at the actual figures suggest that the accusations are really a storm in a teacup. Probably the most important and best-known song the RIAA refers to in its lawsuit is Bing Crosby's „White Christmas," which was streamed or downloaded tens of thousands of times on „Great 78". By comparison, it has racked up over a billion on Spotify alone – to which one can add Apple Music, Tidal, Deezer and the rest of the streaming industry. In short, the supposed loss of profit over Kahle's passion project is unlikely to cause anyone any sleepless nights.

It is also worth noting that the vast majority of tracks on the Internet Archive cannot currently be streamed or purchased anywhere else. This is in line with the frequently voiced observation that, despite the seemingly impressive range of digital platforms, only a fraction of all recorded music is actually available there. The US Library of Congress wanted to get a clearer picture of this and investigated the world's largest private record collection, formerly owned by Paul Mawhinney who ran the Record Rama store for decades and built up a huge archive during his tenure. It contains almost one million albums and one and a half million singles. Surprisingly, not even 20% of these were digitally accessible at the time of the Congress Library's analysis. [2] Most of the shellac records included in the "great 78" are part of the missing 80% iceberg, but many EPs with some great material are also nowhere to be found digitally, as Corey duBrowa emphasises, who has written an exciting book about this (An Ideal For Living). [3].

Why can't these recordings be found on streaming services?

For the same reason that „Great 78" is ultimately not really a threat to the rights holders: Because the industry doesn't expect to make a profit from it. And even if some of the descendants of the musicians on whose behalf the RIAA has gone to court support the lawsuit, almost all of them freely admit that the labels have made no effort whatsoever to legitimately monetise the disputed titles. On the contrary, they have exploited the artists they support for decades with extremely unfavourable contracts. Rolling Stone magazine thus comes to a startling conclusion: „Maybe, if the labels walk away with a fat check, they'll do more than pay lawyers, pad bonuses, or boost shareholder value. Maybe they'll set up a fund that goes directly to all the legacy artists and estates mentioned in the suit — effectively letting a nonprofit pay back the musicians and families those same labels have been accused of exploiting for decades."

The situation is starting to look even more absurd when you look at how someone like Rob Johnson has to help record companies understand the value of the back catalogue. Johnson, who works as a businessman and lawyer, was surprised that the music of singer Jan Johnston, who had worked with trance legend Paul Oakenfold among others, was nowhere to be found on streaming sites. He contacted Warner Music and suggested they finally upload her music. The labels followed his advice - with success. Johnson, who accepted suggestions from fans via a Twitter channel, began to point out even more potential gaps to the majors. Victoria Beckham's single „Out of your Mind", for example, belatedly reached two million streams this way, Nsync's „Girlfriend" amassed an incredible 50 million streams, which the labels would otherwise have missed out on. Incompetence? Johnson, who seems to have built up a good relationship with the labels, blames it more on practical reasons: It's not just digitising old, cracking LPs that is expensive. Maintaining the catalogue also causes costs.[4]

However, there may be a much darker explanation.

Time and again, stories emerge of creatives who are signed but then dropped and whose music remains under lock and key indefinitely - potentially forever. The reasons are probably strategic, according to consultant Mike Burgess: „There are a huge amount of acts that are signed because they might have the thing the label is looking for, or they might not. But it's safer to hoover them up anyway, sign them and retain them." [5]

This explanation makes sense in a world where streaming figures have changed significantly in favour of young, living musicians. On a list of the most streamed acts on Spotify, Queen, the most successful group already active before the year 2000, comes in at number 50, while Oasis' „Wonderwall", the most successful song written before 2000, is just inside the top 100, far behind entries by The Weeknd and Taylor Swift. This makes it clear why labels are actually claiming sovereignty over the past: Because they want to milk it dry or at best use it in homeopathic doses – while actively suppressing it in the majority of cases. It's true: whoever controls the past controls the present. As it turns out, however, destruction is the strongest form of control.

[2] http://www.rollingstone.com/music/news/inside-the-worlds-largest-album-collection-the-3-million-strong-recordrama-archive-20081117
[3] Verfügbar bei https://hozacrecords.com/product/aifl/; [4] https://www.bbc.com/news/articles/cgl7ld1glk3o
[5] https://www.theguardian.com/music/2021/aug/11/i-had-no-confidence-no-money-the-pop-stars-kept-in-limbo-by-major-labels

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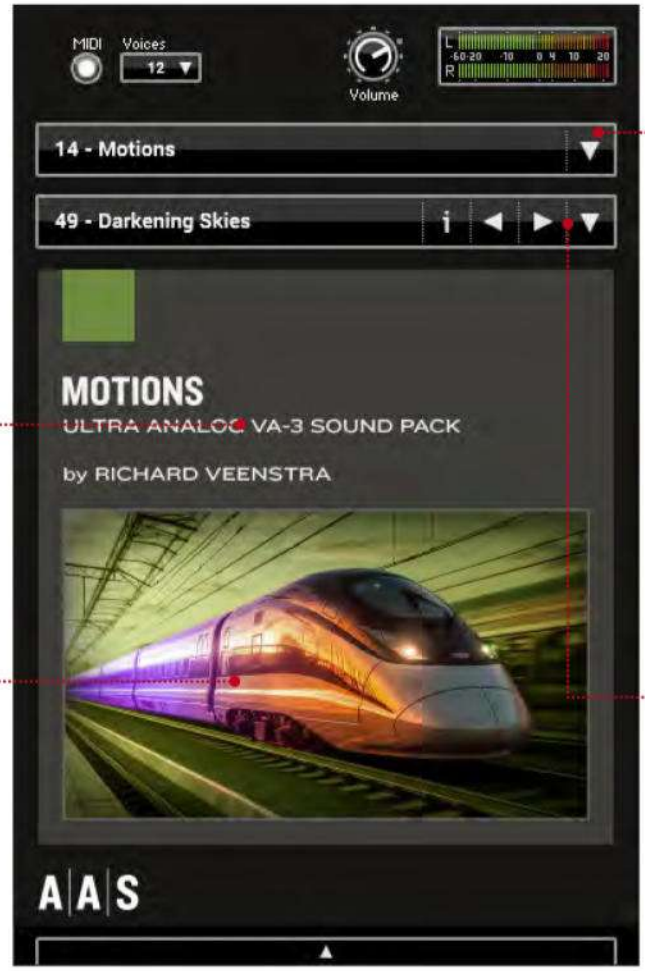
2 Sound Instruments from AAS

Free choice from 76 packs

One software highlight, twice the fun: This month, our friends at Applied Acoustic Systems are giving you two great sound instruments. Whether you're into vintage synth sounds, cutting-edge club sounds or experimental soundscapes, you can choose your two favorites from a total of 76 packs. Whatever genre or style you prefer, you're guaranteed to find the right inspiration for your musical projects here! by Mario Schumacher

1 **Your Sound Hub**
No matter which of the 76 sound packs you choose - all of them can be used conveniently in the free AAS Player. With the swatches bank, this offers a Best-of series with over 75 professionally designed presets from 20 of the industry's leading sound designers. Tip: Download "Swatches" first and test selected patches from all banks. You'll quickly find your two favorites.



3 **Inspiring presets**
Use the left/right arrows in the AAS Player to quickly switch between the presets in the loaded sound bank. The plug-in also has a practical browser in which the sounds are sorted according to categories such as **Basses**, **Leads**, **Pads** and **Percussion**. Thanks to the targeted use of effects, the patches sound ready for production. Tip: You can use the modulation wheel to create sound variations.

4 **Dive Deeper**
Since the sounds in the Sound Pack Series use physical modeling synthesis, they are particularly expressive. If you own the corresponding plug-in with which the sounds of a bank were created (such as **Ultra Analog VA-3** or Multiphonics CV-2), you have the option of editing the presets in detail and creating your own sound creations.

2 **Ingenious sound variety**
All installed sound packs created with the inspiring sound generators from Applied Acoustic Systems appear in the preset browser of the AAS Player: Ultra Analog VA-3, Chromaphone 3, Multiphonics CV-2, Strum GS-2, String Studio VS-3 and Lounge Lizard EP-4. You can expect impressive sounds - from classic analog and modern digital sounds to expressive reproductions of acoustic and electric instruments.

REGISTRATION & INSTALLATION

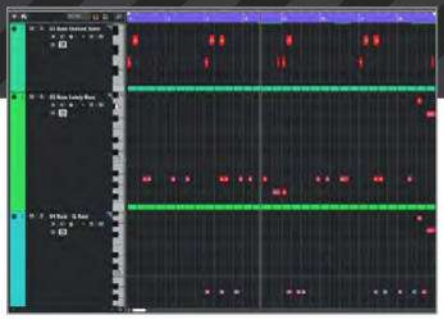
You can register your two Sound Instruments from AAS through www.serialcenter.de. You will then receive a link to register and download the two sound packs of your choice. You can choose from a total of 76 packs.

1 Select sound packs

Explore the sound universe of AAS. The AAS Player offers you an excellent starting point with the free **Swatches** sound bank. On board are over 750 presets from all sound packs in the series. Tip: Play the AAS Player sounds first and choose your favorites. Our choices were **Tabby Dance** and **Plastic Pop**.

2 Electropop bass

These two packs were perfect for the Retro Electropop sound we had in mind for our sample track. First, we built a beat at 125 BPM using samples from Loopcloud **[1]**. Then, we added a bass to the beat. Preset **63 - Groove Town** from the **Tabby Dance** sound bank is ideal for powerful accents.



3 Second bass

So, we only let the sound play the first notes of every second bar in the Verses of the song. For more drive, we added the 3 - **Lately Bass** from **Plastic Pop** to the bassline. As this bass sounds quite dry, it is ideal for processing with effect plug-ins. With Heavyocity Fury **[2]**, we gave it a rich distortion.

4 Acid bass

It got even livelier when we brought the **49 - Q bass** from the **Swatches** sound bank into play, which can be transformed into a cool Acid Bass with a little effect processing. First, we used a Gate plug-in to remove the short Reverb effect, because we needed a dry sound for the following distortion with Fury (preset: **Driven Tube**).

5 Delay and reverb

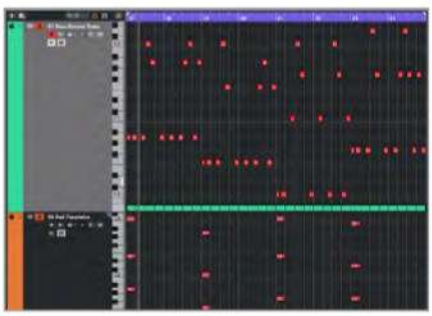
Then, add Delay and Reverb to the sound. It sounds particularly cool if you add Vibrato to selected notes using the Modulation Wheel. Now how about an Arpeggio? For this, we recruited Patch **52 - Short Cut** from **Plastic Pop**. We wanted to automate the Filter Frequency, but this is not possible with the AAS Player.

6 Filter envelope

So it's time to play tricks! We loaded FabFilter Volcano 3 **[3]** as an Insert effect and set up the filter plug-in as shown in the picture. We clicked on the + symbol to insert a Modulator and selected **New Envelope Generator**. We connected this to the Filter Frequency using Drag & Drop and set a Modulation Intensity (**Slot 1 Level**) of **0.175**.

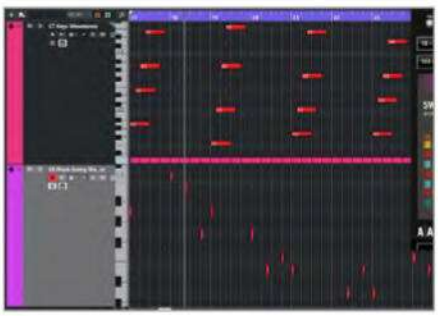
7 Arpeggio

This made the pluck sound more muffled, as desired. You can control the filter frequency via host automation. With a dotted eighth note delay and a lush reverb effect, the arpeggio shown sounds even more atmospheric. Speaking of atmosphere - a pad would be great now, wouldn't it? Try out patch **84 - Fountains of Lush** from **Plastic Pop**.



8 Pad Chords

Thanks to the lush reverb and delay, the chord notes only needed to be struck briefly. We played a chord sequence for the chorus of our track, which the basses followed with a now denser sequence. Now we wanted to give the track a little more melody. The sound **34 - Waveterms** from **Plastic Pop** was an excellent choice for this.



9 Melodies

NI Replika XT **[4]** and Valhalla ShimmerVerb **[5]** added depth and atmosphere to the sound. We used it to play a melodic sequence that emphasized the chord changes. For a complementary melody (see picture), we used the patches **702 - Sunny Mallets** from **Swatches** and **52 - Short Cut** from **Plastic Pop**, which we also garnished with delay and reverb.

[1] www.loopcloud.com; [2] www.heavyocity.com; [3] www.fabfilter.com; [4] www.nativeinstruments.com; [5] www.valhalladsp.com

Power Producer: FL Studio

Mixing trick for fat drums

Aside from the vocals, the drums are the most important elements of most songs. Like a kind of skeleton, they form the basic structure of a song. You should be aware of this important role when mixing. If the drums lack punch, volume and general presence, as is so often the case, then this trick will help to bring them back to the front. by Ruben Mantel

Project info

Material: Fruity Loops Studio 2024
Time required: 15 minutes
Content: Present drums using parallel compression
Difficulty: Advanced

1 Drum Bus

The first step is to merge all the **various drum tracks** into a single channel. To do this, click **Route to this track only** at the bottom of the **Drum Bus** channel with a selected drum track. This means that the signal is no longer routed directly to the Master Bus, but to the **Drum Bus** in order to have general control over the drums there.

2 Parallel Bus

Name another channel and reduce the **Fader** by around **10db** downwards. Then, select the individual drum track and click on **Route to this track** at the bottom of the **Parallel Bus**. As the name of the bus suggests, the aim is to process the drums in parallel to the normal **Drum Bus**.

3 Compression

Load a **fruity compressor** in the Parallel Bus. We set the **Ratio** to **4:1** and go for a very fast **Attack** time between **0 and 10ms**. Then, listen exclusively to the signal from this bus and reduce the **Threshold** until you can hear a **very strong**, almost distorting compression. Also increase the **Gain** by **6db**.

4 Distortion

To literally amplify the overall effect of the Parallel Bus, we now load the **fruity blood overdrive** plug-in into the signal chain. Keep the standard preset and only change the **Preamp Control** to **0.4**. Note: It's not a problem if this bus sounds downright "broken" when soloed. After all, it will only be mixed in later.

5 Highpass Filter

To prevent phase problems in the low frequencies when mixing later, we add the **fruity parametric EQ 2** as the next plug-in. Then, right-click on the **lowest band** under **Type** to select a **Highpass Filter** and set it to around **50Hz**. If problems arise later in the bass range, simply increase the frequency.

6 Leveling

Pull the **Fader** of the **Parallel Bus** all the way down and let the Drum Bus signal play **audibly** again. Now **slowly mix** in the signal from the Parallel Bus using the Fader until the drums achieve the desired full and **present** sound **without distorting** too much. **Bonus tip:** This trick can also be applied to **vocals** in a very similar way.

Power Producer: Logic Pro 11

Pro vocals with stock plugins

Logic Pro comes with a variety of plugins that allow you to easily create a professional vocal chain without having to resort to expensive third-party plugins. In this article, we'll show you a vocal chain that fits the current trends and makes vocals sound clear, powerful and present. by Stefan Hofmann

Project info

Material: Logic Pro (Version 11.0.1)
Time required: 30 minutes
Content: Modern vocal chain
Difficulty: Advanced

1 Performance is the Key!

A good vocal chain can get a lot out of a voice, but it can't work miracles. It is, therefore, important to deliver a good performance when recording the vocals. Try to feel your way into the emotions of the track before you hit the record button. You can also use reverb and pitch correction during recording.

2 Speech intelligibility

In today's Pop and Hip Hop tracks, bass and drums need a lot of space. That's why we give our vocals a high **Lowcut** at around **142 Hz**. We also use the **Vintage Tube EQ** to emphasize the frequency ranges for speech intelligibility around 3 kHz with a **High Bandwidth** of **8** by around 3 dB. We continue with the Pitch Correction.

3 Tune it!

Pitch Correction allows us to add the familiar Autotune effect to our voices. With a low **Response** of around **2.6** ms, this is extremely audible. Depending on the vibe you want your song to radiate, you can adjust the effect using this control - from extremely to barely audible. It is also important that you set the correct key.

4 Compressor and Limiter

Using the Logic Compressor, we limited the dynamics and added more punch with the **Classic VCA Mode**; a **Ratio** of **4:1** and a Level of **-5**. The Limiter at the end of the chain with a Reduction of around 3dB makes the signal even more present. We use some **Saturation** before the **Limiter** to thicken the vocals.

5 ChromaGlow

With Logic's new saturation plugin **ChromaGlow**, we want to make the timbre of the vocals more interesting and create a slight Distortion effect. We work with the **"Retro Tube"** model and the **"Colorful"** style. We set the **Driver** to **22%**. Our voice now comes through even better - all that's missing is the Reverb.

6 Reverb!

We give vocals the finishing touches with the reverb. We load the **Space Designer** onto a Bus and set the **Send** to **-20**. With a **Pre-Delay** of **23ms**, a **Length** of **1.5s** and a **Size** of **83%**, you can achieve a great vocal reverb. Adjust the settings for each voice and save them as a preset.

Power Producer: Cubase

Synthwave Track Starter, Part 2

The iconic synth sounds of the 80s, paired with modern techniques, have made Synthwave a cult - The Midnight, Scandroid and Kavinsky send their regards! In Part 1 of our workshop, we created the basis for a retro-futuristic track in Cubase - with a driving beat, pad, arpeggio and bass. Now we'll show you how to make your Synthwave track unmistakable with captivating melodies! by Vera Schumacher

Project info

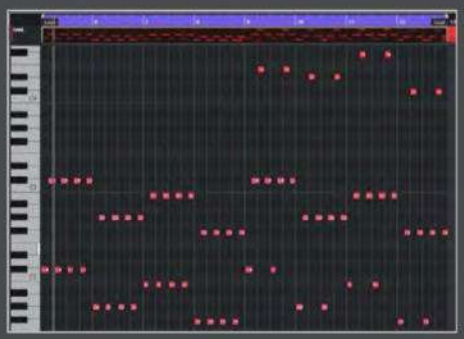
Material: Cubase Artist or Pro
Time required: From 60 minutes
Content: Adding catchy melodic elements to the Synthwave track from the previous issue.
Difficulty: Advanced

1 Fundamental

After creating the basis for a Synthwave track with beat, pad, arpeggio and bass in the last issue, it's now time for melodies! We decided on the chords C# minor, G# minor, Bb major and F# major. We also used the G# Aeolian scale (Natural Minor), which creates a melancholy, nostalgic mood.

2 Lead sound

Now we want to add a classic analog lead sound to our tracks. To do this, load the Retrologue synthesizer with the Vintage Mini Lead preset. Wouldn't it be cool if the notes played were automatically adjusted to the selected scale? Nothing could be easier! Open the **MIDI Inserts** section in the **Inspector** of the Lead Track.



3 Select scale

Then, load MIDI Modifiers into Slot 1. This MIDI Insert effect can be used to modify incoming MIDI data. For **Main Pitch to Scale**, select the **Aeolian** Scale (**Natural Minor**) with the **Scale Note G#**. This allows you to find melodies that always match the key of your song. Our lead sound picks up the bassline notes, with octave jumps in an eighth-note rhythm.

4 Hook

In order to provide variety later on in the song, we bring other chord tones into play alongside the basic tones. Now let's add a recognizable hook. For the keys sound, load Retrologue with the **Analog R8 Strings** preset and adjust the envelopes and filter parameters as shown. Want more depth and liveliness?

5 Play melody

The **Chorus**, **Delay** and **Reverb** effects take care of this. Load **MIDI Modifiers** as a MIDI Insert for this track, too, and set the **Scale** mentioned here. Then play a melody that matches the other instruments. Here are a few tips: Start with the root notes of the chords as a basis. Then add transition tones before chord changes.

6 Melody tricks

To bring the melody to life, you can use additional **Scale Notes** and build up the line from phrases in question and answer style. Experiment with rhythms and syncopation to create dynamics and tension. Repeat motifs for a memorable melody, but vary them slightly to keep it varied.

Power Producer: Ableton Live

Instant rolling Techno basses

Does your Techno beat somehow seem weak and doesn't seem to really get going? Then try a "rolling bassline". In contrast to heavily syncopated basslines, this creates a flowing and driving groove that has a hypnotic effect. In this workshop, you will learn how to program a bassline like this, create a suitable sound and set a rhythmic counterpoint. by Maya C. Sternel

Project info

Material: Ableton Live 12
Time required: 30 minutes
Content: Sound design for a Techno Bass and Sub Bass using the Analog Synth; programming a rolling bassline; giving kick drums more assertiveness; creating a counterpoint phrase.
Difficulty: Advanced

1 Choose kick sample

Choose a moderate tempo of 124 BPM and program a kick on all four beats of a bar. Take a kick sample with a clear transient, enough top end and not too much sub bass. Next, program a bass sound consisting of two layers. Load an Analog Synth into a new track. Deactivate **Oscillator 2**.

2 Create a unison bass

Select a sawtooth wave for Oscillator 1. To tune the oscillator an octave lower, set Octave to -1. Select the filter section. Set the **Cutoff** frequency to 50. To modulate it with the envelope, set the **Envelope Env** to 5.12 under Freq Mode. Activate the **Unison Mode**, set **Detune** to 36 and select 4 for **Unison Voices**.

3 Program sub bass

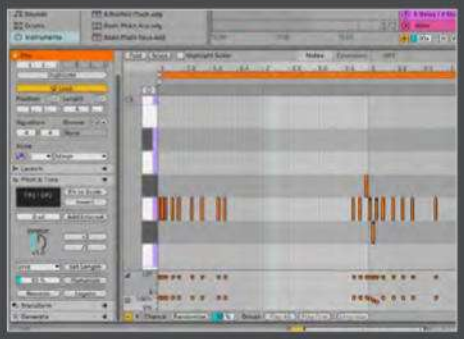
Close the gaps between the kicks and program a bass clip with continuous 1/16th notes on one note, such as G2. Load an EQ with a **Lowcut** of **100 Hz** into the track to make room for the sub bass. Create another MIDI track with an **Analog** for the sub bass. Select a **sawtooth wave** for **Osc. 1** and set Oct. to -2.

4 Filter frequency

Set the **Filter Cutoff Frequency** to 44 and the Env. to 4.3. In the Amp Section, set **Sustain** to 0 and **Decay** to 723. Select a **square wave** for **Osc. 2**. Set the level of **Osc. 2** to -18 dB and Oct. to -1. Add an EQ with a **Highcut** of 530 Hz. Duplicate the bass clip and move the notes down an octave, for example to G1.

5 Volume shaper

Group both bass tracks. Load the shaper audio effect into the bass group track. Select the second waveform from the left. Deactivate Snap and place another point in the middle of the second quadrant. Activate **Remote** with **Minimum 10%** and **Maximum 50%**. Load the Utility audio effect and map the shaper to the Utility's Gain.



6 Set a counterpoint

Now the first 16th of the bass is no longer played in full and the kick comes through better. Then, load a pluck sound into another MIDI track. Create a 4-bar MIDI clip and program a rhythmic pattern of 32nd notes in the 1st and 3rd bar on the root note. Add a delay on top! Now your beat should really roll!

Presets and audio demos in the magazine downloads (see Page 9)

Power Producer: Bitwig Studio

DJ effects with the FX Selector

Rhythmic multi-effects such as ShaperBox 3 and Infiltrator 2 take the most boring drum beat and the most tired synth pad and create completely new soundscapes. As a Bitwig user, you can also easily build these effects yourself with the FX Selector. The container can be loaded with effects and VSTs and you can then switch rhythmically between them using the Modulators. Let's go! by Laura Emiliano

Project info

Material: Bitwig Studio 5
Time required: 30-60 minutes
Content: Create rhythmic DJ Effects with the FX Selector in Bitwig.
Difficulty: Beginner to Advanced

Audio Demo

1 Free multi-effects

The unique thing about multi-effects such as ShaperBox 3, Infiltrator 2 and Effectrix 2 is not necessarily the selection of effects. Rather, it is the rhythmic triggering of an effect chain or even just a single effect that makes these plug-ins so interesting for DJs and sound design fans. We Bitwig users will simply recreate this for ourselves.

2 Stock or External

Before we even get to the FX Selector, I recommend selecting the desired effects as a first step. Unlike ShaperBox and the like, with FX Selector you are not limited to the in-house, that is, Bitwig-integrated effects. Any effect plug-in is possible! The performance of your computer is the decisive factor here.

3 FX Selector

To get started, I recommend a simple drum loop or a vocal loop as a sound source, because the more rhythmic the source, the more audible the result. Then, load an FX Selector in the first effect slot on the track with the loop. And then load the first effect in the **Drop Devices Here** section, starting with a Filter+.

4 Modulate this

Now load the **Curves** Modulator in the Effects module, as this allows curves like in ShaperBox. Paint the curve as shown in the picture (or as you like it) and then set the module to Mapping Mode. To get started, I recommend only modulating the **Mix Control**. Save the curve in **Curves**, we'll need it again soon.

5 More effects

Under Filter+, load the next effect (in my case Flanger+) and repeat the procedure: set the effect, load the **Curves Modulator**, load the curve into it, connect the **Mix Control** to **Curves**. I then use two VST effects: Decapitator from Soundtoys and Objeq Delay from AAS. The more extreme the settings of the effects, the better!

6 Reverse and Remix

Up to now, you have been switching between effects manually by clicking on the small yellow circle in FX Selector. This is now done by the **Steps** Modulator. Load it into FX Selector, connect it via Mapping Mode with the Effects Selection menu at the top of FX Selector and change the steps as shown in the picture - Instant Remix!

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Test: HOFA Colour Delay

The name says it all: Colour Delay was not developed to delay the audio signal as unadulterated as possible, but to color the sound audibly. To achieve this, the creative effect offers various modules both in the feedback loop and at the end of the signal chain. by Jan Wilking

Features

Software delay
4 combinable styles
Tape, Bucket, Digital, Tube
5 post-delay effects
Interactive display
VST3/AAX/AU
Windows 7 and Mac OS 10.13

Beat VERY GOOD 01/2025

Fakten

Developer: HOFA
Web: hofa-plugins.de
Distribution: Website
Price: 85 Euro

- ▲ Intuitive operation
- ▲ Many combinable effects
- ▲ Very good sound
- ▲ Sophisticated user interface
- ▲ Interactive display
- ▲ Ducking with sidechain option

Sound:
Operation:
Price/Perf:
Total:

Alternatives

Baby Audio Comeback Kid
69 Euro
babyaud.io

Native Instruments Replika XT
69 Euro
native-instruments.com

Newfangled Audio Recirculate
99 Euro
newfangledaudio.com

With the interactive display, you can adjust the delay and frequency response and see the effects directly.

After the smooth installation by way of the HOFA Plugins Manager, the very clearly laid out interface of this plug-in is immediately noticeable on its first start. No attempt has been made here to graphically reproduce hardware, but the advantages of modern software have been fully utilized. The individual sections are clearly delineated, symbols and colors make them easier to recognize and large controls with clear labels invite you to tinker. In addition, the effects of the parameters are shown centrally on an interactive display. And, if desired, a pop-up note appears for each parameter with a brief explanation of the function and a direct link to the corresponding chapter in the manual.

Retro Delays

The upper section of the plug-in is dedicated to the effects in the Feedback Loop. With four modules, which can be activated individually or combined in a selectable order, you can recreate old delay classics or create your own new variations. Tape offers the distortion, flutter and pitch fluctuations of a tape echo. Bucket Brigade simulates an analog bucket brigade delay with different variations of the rather dark and noisy LoFi sound. Digital provides the artifacts of early digital delays, from slight aliasing to chip sounds to digital chaos. And destruction combines tube distortion and clipper for a rather warm and round distortion.

Interactive Display

In the middle section, you set the delay time (can also be tapped in if required) and the feedback, which also allows values far above 100% for endless loops. Various ping-pong variants are available for selection and modulation of the Delay Time is also possible.

Next to it is the large interactive display. It shows the pulses over time and visualizes the modulation using waveform graphics. The dry/wet ratio, delay time and Feedback can be set directly and tracked visually. Below this is the fully parametric equalizer with a real-time analyzer.

Additional effects

The lower section is reserved for the five effects connected behind the delay, which can also be freely combined. An auto panner modulates the signal in the stereo field. This is followed by the modulation effects featuring a chorus for a broad stereo sound and a phaser for the typical floating delays in the style of Jarre and the like. We also liked diffusion, a very dense and atmospheric reverb-like effect. And finally, there is a function that is unfortunately too often forgotten in delay effects: Ducking, winkingly decorated with a stylized duck. This is effectively a downstream compressor that makes the effect quieter depending on the volume of the incoming audio signal. At the extreme setting, you will only hear the effect in the signal pauses. A slight reduction is sufficient for more transparency. Thanks to the sidechain option, ducking can also be triggered by another audio track, which offers scope for rhythmic experiments such as a "pumping" delay.

Global functions

The global functions in the top bar include Undo/Redo and a practical A/B switch for comparing two different settings. In addition to the mixing ratio of original and effect, the width of the effect can also be limited globally here. If it becomes apparent in the mix that the effect has become a little too wide, this can be quickly adjusted with a fader.

Verdict

Colour Delay is not only impressive in terms of operation and features, but also in terms of sound. The plug-in enables subtle effects, as well as extreme feedback orgies and everything in between. Each effect module has its own special sound, and completely new delay effects can be achieved by freely combining different modules. Thanks to its clear interface and functions such as moving the modules using drag & drop, as well as the interactive display and manual, Colour Delay is ideal for beginners. It also offers professionals plenty of scope for quick and creative implementation of ideas and experimentation.

More info

Test: Baby Audio Transit 2

Just one year after YouTuber Andrew Huang and Baby Audio released the Transit multi-effect, Transit 2 is the latest upgrade. More modulators, more effects, more presets - they are slowly stalking multi-effects such as Infiltrator and Shaperbox. by Laura Emiliano

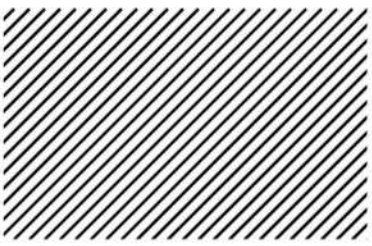
If you liked Transit, you'll love Transit 2. That much is certain. Because the basic concept of combining a series of effects and automatically applying them to individual tracks or entire song parts via the global Macro Control for song transitions or drops has not changed. Version 2 comes with ten new effects (28 in total), four new modulators and almost five hundred additional presets. The new modulators in particular could make Transit 2 an increasingly serious competitor to Shaperbox 3, Infiltrator 2 or Effectrix 2. Let's listen in!

469 Presets – not only for transitions

With the almost five hundred new presets, we now have over 800 presets. All presets from Version 1 are included and sound exactly the same as in Version 1. Conveniently, the many new presets are sorted into several sections: Transition, Motion, Multi-FX and Glitch. And so it is above all in the former that you can marvel at Transit 2's showpiece discipline, the multi-effect transitions. Compared to Version 1, there are a whole series of powerful transitions here. Multi-FX and Glitch show, in large part, what the new effects can do. The presets in the Motion section are particularly suitable for adding more movement to synth pads or choirs. If you can't make up your mind, press the Random button in the Preset Browser.

Old, new workflow

The workflow in the plugin has not changed: You can now select up to seven effects in the seven Effect Slots. Their Dry/Wet controls, as well as a whole range of other parameters, are then connected to the global Macro Control. And this can now be moved in seven ways.



But first things first. The ten new effects Warp, Loop, Reverser, Speaker, EQ, Analog Chorus, Shifter+, Mod Filter, Retroverb and Compressor bring Transit 2 to the forefront, especially in Andrew Huang's specialty area of Glitch and Warp sounds. The first three effects, in particular, turn the multi-effect into a real sound design monster when combined with Distortion or Delay.

Warp, Loop and Reverse

Ambient pedals such as Chase Bliss Mood MKII or Hologram Microcosm seem to have been the inspiration for these three effect modules, in particular. This is because micro-looping involves cutting up, detuning and looping small audio snippets of the source material in a similar way to a granular effect. Epic clouds of sound are also possible with Warp, Loop and Reverse in combination with a Reverb or Delay. I hope that the two reverb effects, Reverb and RetroVerb, will be improved in the future, as they are very clattery, so it's better to switch to other plug-ins. On the other hand, the pleasantly beautiful scratching of the Speaker Module, an emulation of a distorting loudspeaker, has embellished some self-built presets.

The new modulators

Transit 2 takes a big step towards true multi-effects like Shaperbox 3 with its four new modulators: LFO, Envelope Follower, Sidechain and Gate. With the LFO, you wish you could also use the self-drawing curves from the aforementioned multi-effect to tune the movement even more precisely. But it moves more!

And with dynamic vocals, in particular, the Envelope Follower, which uses the volume of the input signal as a modulation curve, can take vocals to a whole new level - depending on how loud you sing! It gets even crazier if you use the function via sidechain. Whenever the voice comes in, Transit 2 pushes the synth pad into effect nirvana, for example.

Verdict

With effects such as Transit 2, I really appreciate the fantastic and unchanged Random function, which randomly adjusts all effect slots and parameters, with the exception of the settings that were previously excluded from the change. This plug-in is slowly but surely becoming a very powerful multi-effect. An absolute recommendation!

More Info

Features

- Multi-effect
- Over 800 presets
- 28 Effects (10 of them new)
- 6 Modulators (4 of them new)
- 7 Effect slots
- Random function
- VST, VST3, AU, AAX ab Windows 7 (64bit), MacOS 10.7

Facts

Developer: Baby Audio
Web: babyaud.io
Distribution: Website
Price: 129 Euro (29 Euro for upgrade)

- ▲ Powerful random engine
- ▲ Creative new effects: Warp, Loop and Reverse
- ▲ Variety with the new presets
- ▲ Easy entry for users of Version 1
- ▲ Fast workflow
- ▲ Envelope follower allows for dynamic effects

Sound:
Operation:
Price/Perf:
Total:

Alternatives

Devious Machines Infiltrator 2
119 Euro
deviousmachines.com

Cableguys ShaperBox3
99 Euro
cableguys.com

Sugar Bytes Effectrix 2
129 Euro
sugar-bytes.de

Test: PreSonus Studio One Pro 7

Studio One Pro 7 offers over 30 new features, with the launcher being particularly eye-catching. But the update is also worthwhile for the stem separation, Splice integration, global transposition, improved tempo detection and the extended integration of the Impact drum sampler. by Jan Wilking

Features

Audio-MIDI sequenzer

For recording, production, mastering and live

ARA2 compatible (incl. Melodyne Essential)

Linear arrangement or clip-based (new)

Stem separation

Direct Splice integration in the browser

Advanced tempo detection

Windows and macOS: 64 Bit

Facts

Developer: PreSonus
Web: presonus.com
Distribution: Website
Price: 199 Euro (Update 149 Euro); In the Sphere Sub: 179 Euro per year

- ▲ New clip launcher
- ▲ Stem separation
- ▲ Global transposition
- ▲ Splice integration
- ▲ Advanced tempo detection
- ▲ Impact integration in drum editor
- ▲ Extended loop functions
- ▼ GUI not scalable

Features:
Operation:
Price/Perf:
Total:

Alternatives

Bitwig Studio
99 Euro
bitwig.com

Ableton Live 12
79 Euro
ableton.com

Apple Logic Pro
230 Euro
apple.com

With the new launcher, you can combine clips independently of the time-linear arrangement.

With its Scratchpad, arrangement track and the new loop functions, Studio One is certainly very flexible when it comes to creating songs from individual loops and patterns. However, the DAW always remains on a linear temporal level.

With the new Launcher, you can now also record audio and MIDI loops in Cells independently of the arrangement sequence and trigger them in any combination. Combinations of cells can be saved as a scene and several scenes can be strung together as a playlist to try out alternative song progressions and transfer them to the arrangement if you like them.

More Bitwig than Live

PreSonus has based the integration of its Launcher on the arrangement view in Bitwig: In contrast to the session view in Ableton Live, the clips of a track are arranged next to each other and not below each other. This has the advantage that the events in the arrangement and the clips on this track can be displayed in parallel. You can then freely determine whether the material in the arrangement or the clip in the Launcher should be played.

In direct comparison to Bitwig and Ableton Live, you can still tell that Studio One is new territory for PreSonus. Automation could not be recorded in clips and the exchange between the two areas did not always work smoothly. But at least they've made a start.

Global Transpose

Global Transpose is also helpful when composing, with which you can transpose all tracks (audio and midi) up or down by any number of tones using a single movement. Individual tracks, such as drums or vocals, can be removed. Naturally, this quickly sounds artificial with a lot of audio material and any kind of drastic changes.

Stem separation

Stem separation, that is, the splitting of complete songs into individual tracks, is also newly integrated. The separation is limited to four tracks: Vocals, bass, drums and the remaining material. Unfortunately, there is no further division of drums into kick, snare, hihat and so on, or separation of other instruments such as guitars. And the quality of the results cannot keep up with specialists such as Steinberg SpectraLayers. On the other hand, stem separation in Studio One works quickly and the result is distributed directly to different tracks in the Arrangement so that you can work with it without any additional intermediate steps.

Splice integration

Version 7 also comes with suitable material for editing, as Splice's huge sample library has been integrated. This gives you access to thousands of loops and samples that can be previewed at lightning speed and are automatically adjusted in both tempo and pitch/key. And all this is done directly in the DAW browser, without having to open an external program or plug-in. You can also drag your own chord progressions or even entire arrangements into the browser and the AI will search for suitable samples from the Splice library! The catch is that, although some samples are supplied free of charge, the whole thing is only really useful if you take out a Splice subscription - which costs at least $13 US dollars per month.

New license model

Subscription is an important keyword, because Presonus has changed its licensing policy. The entry-level versions have been discontinued and a price of 199 Euro, which includes updates for 12 months, is due at the beginning. Later updates then have to be paid for at 149 Euro each. The comprehensive Sphere subscription for 179 Euro/year may be the cheaper option.

Verdict

Version 7 adds some modern features to the DAW. With the new Launcher, clips can be started and combined independently of the song progression, which unleashes additional creative potential. Although the whole thing is not yet at the level of Live or Bitwig, it is definitely a useful addition. The direct integration of Splice gives you access to thousands of tonally and rhythmically customized sounds and samples. Integrated stem separation is also very practical if you want to work creatively with ready-made loops. In addition, there are numerous other helpful functions that more than justify the update price for us - even though not everyone will like the new license model.

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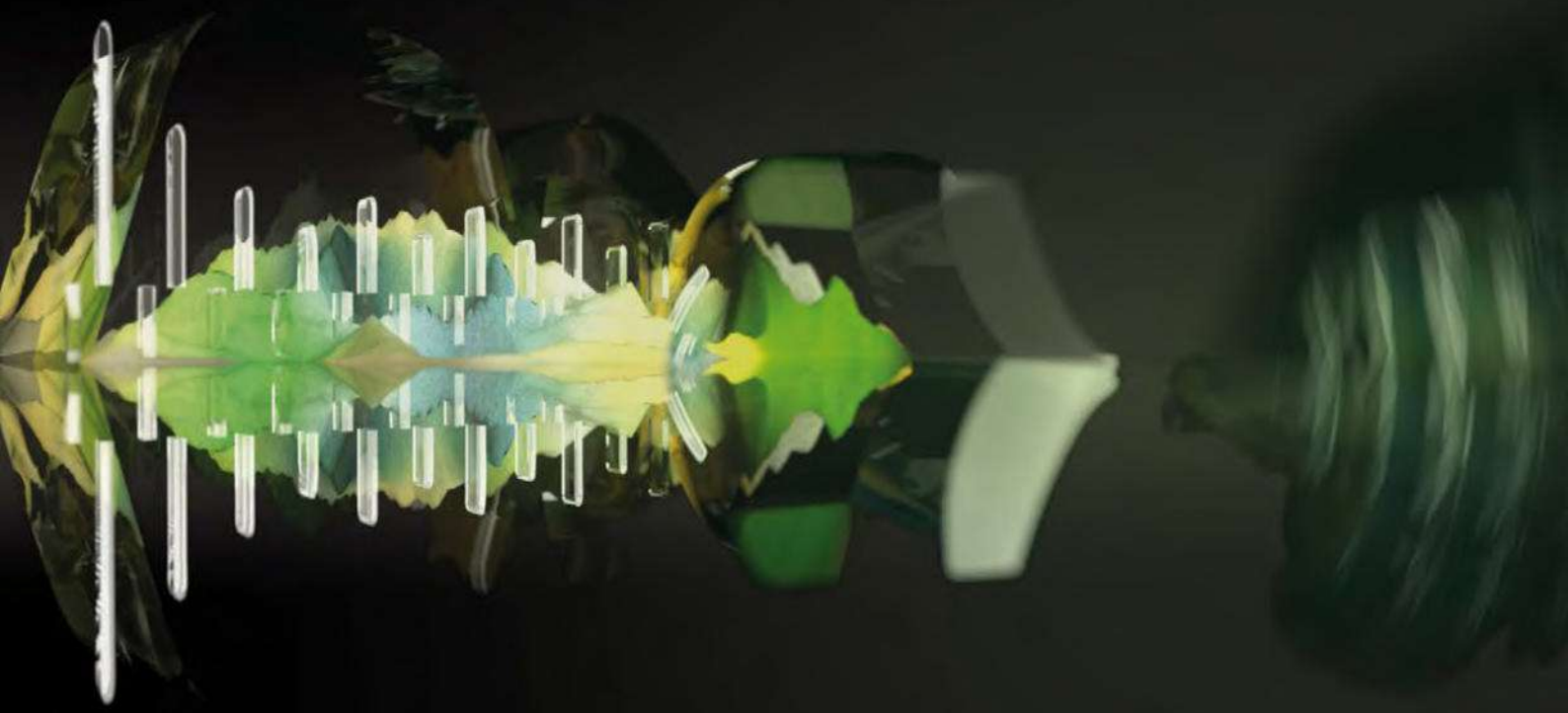

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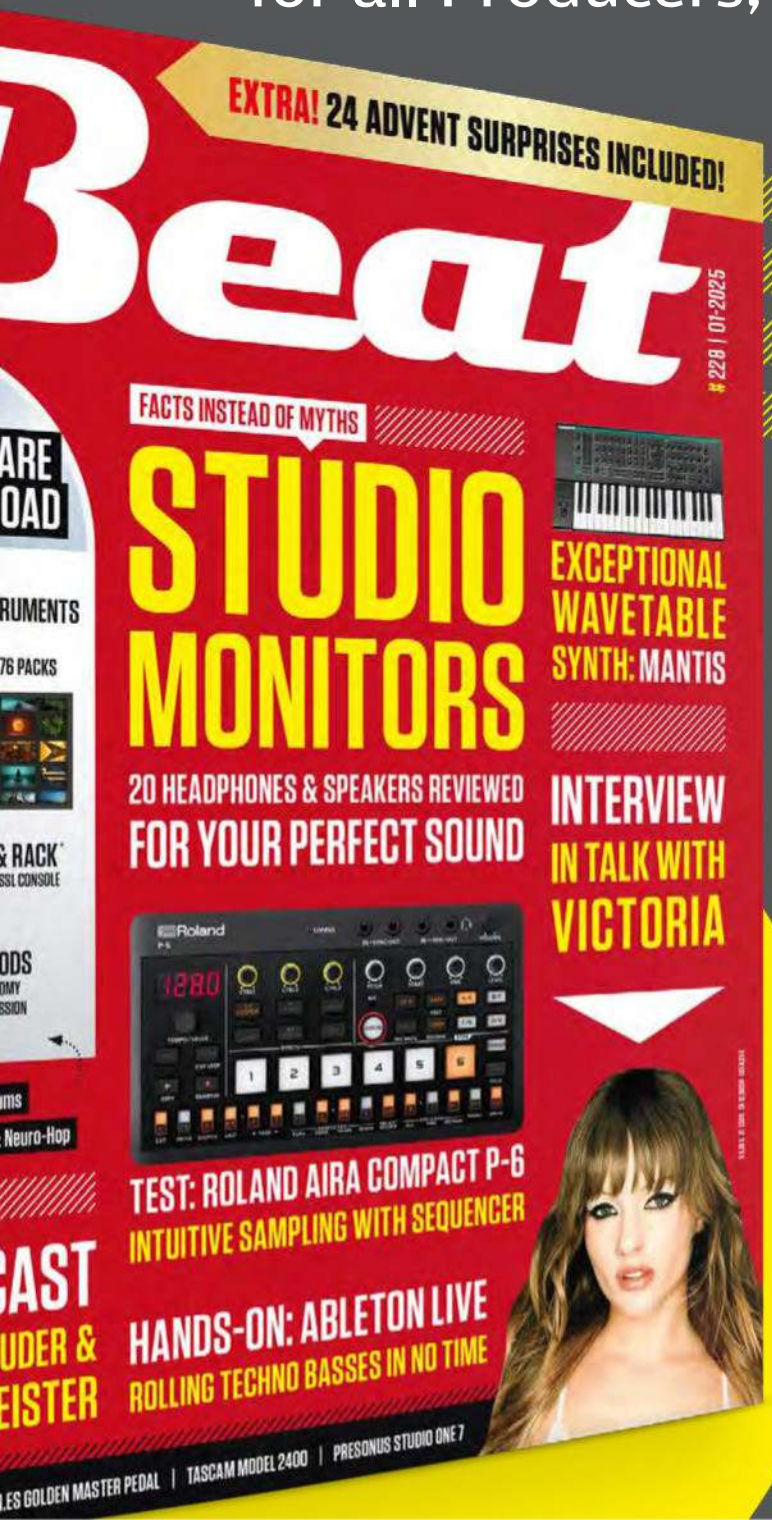
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www.musiclab.com **Gift ID: F1585**

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www.realitone.com **Gift ID: F1512**

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* Only while stocks last. Software is delivered as a download with a serial number.

Presets and audio demos in the magazine downloads (see Page 9)

Hands-on: Recreate Top-Ten Sounds

Dope Tracks

Audio demo Hugel, Topic

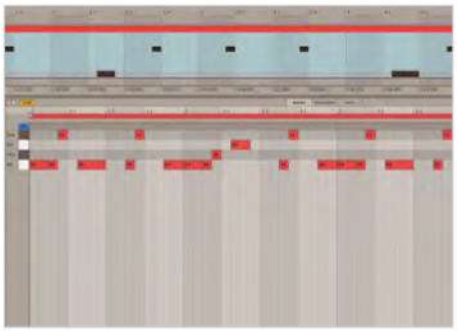
Audio demo Armin van Buuren

The desire to have that ONE sound at home, that one track that you can't get out of your ear, unites us Producers. Listen once, turn the knobs, done. But transferring what you've heard to the right parameters with the right values takes training. Every month on Dope Tracks, we present two sounds from currently hot songs - this month Armin van Buuren with "Es Vedrá" and "I Adore You" by HUGEL, Topic & Arash featuring Daecolm. by Julian Schmauch

Project info:

Material: DAW, various plug-ins
Time required: 1 – 2 hours
Content: Reconstruct the sounds of popular Pop & EDM tracks.
Difficulty: Advanced to Pro

HUGEL, Topic & Arash featuring Daecolm – I Adore You: Pluck w/ Diva



1 Marseille and Solingen

When two of Europe's most successful Techno producers join forces, it HAS to be good. Tobias Topic has been on a steep upward trajectory since 2016, and Florent Hugel has been similarly successful for a similar length of time. They teamed up for "I Adore You" in July 2024 for a belated Summer hit.

2 Better safe than sorry

The vocals are provided by a double act. Social media phenomenon Arash provides the main voice with his dreamy vocals; British singer Daecolm contributes his part and you're already somewhere on the beach and adoring each other: "I Adore You - I Adore You". Today's sound can be found at 2:24 in the radio version, a hidden Arp.

3 Little Arp

With so much voice and beat, there is barely any room for other sounds, apart from the pad sounds. But in the back part of "I Adore You", a small arpeggio in B minor (I prefer the international chord name) sneaks in between the vocals. And this can be perfectly recreated in the VST plug-in U-he Diva.

4 Juno what I'm saying

Diva is not only impressive in terms of sound. Its semi-modular structure also allows a wide variety of emulations to be combined. And after much trial and error, the combination of **DCO** for the oscillator and **Cascade** for the filter came closest to the sound. Transpose in the DCO is set to 4', the Cutoff in the Filter to 85.50.

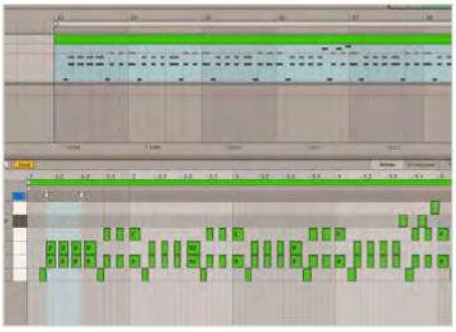
5 Digital envelope

With the envelopes, only the Digital Env modules were fast and "snappy" enough to get close to the twitchy, plucked-sounding arp. As is so often the case with pluck sounds, the magic lies in the very short **Decay** and **Release** values. **Env 1** must be set to 31.50 for **Decay** and 35 for **Release**, **Env 2** to 35.5 for **Decay** and 37 for **Release**.

6 Delay and reverb

The Plate Reverb in Diva is one of the best sounding on the market, especially when integrated into synths. A dose of it, plus a larger dose of the Diva Delay, provides the necessary size and blurriness in the sound. If you need it crisper, simply turn the **Cutoff** up further, it becomes softer with a slightly slower attack.

Armin van Buuren - „Es Vedrá“: Lead w/ Spire



1 Endless Ibiza

I have to admit, I‘ve never been much drawn to Ibiza. I‘m more made for dark cellars, glaring strobe lights and broken beats. But I am well aware of the importance of that party island for Club Culture. And hardly any other internationally active DJ and Producer is as closely associated with the island as the Dutchman, Armin van Burren.

2 16 Residencies

According to DJMag, van Buuren has 16 residencies on the white island under his belt - he practically lives in the clubs. In September 2024, another such residency was due and Armin took an opportunity to pay musical tribute to the place on Ibiza that best captures the magic of the island: Es Vedrá, a rocky mini-island on the southwest coast of Ibiza.

3 Funky chords

Just the way the two chords, B minor and E5 (power chord), are played ensures acoustic recognition, so that you could put the MIDI notes on virtually any polyphonic instrument and it would be immediately clear which song they come from. Slightly offset first against the beat, then dissolved with it, you‘ll be bobbing and grooving along before you know it.

4 Massive pad

Spire would certainly have enough sounds in its massive preset library that would come very close to the original. After all, there is hardly any soft synth that better suited for EDM, Progressive House or Deep House. But where would the fun be then? Let‘s start with **Osc 1** on **Classic** and **Piano A2** as the second wave, with which we mix via **WTMix**.

5 Wide unison

You can enhance the epic sound by setting “4 Voices” in Spire‘s Unison module and then turning up “Wide” in the mix module. Only “Detune” must not be turned up too far, otherwise it will sound crooked. Set **Osc 2** to Noise, you don‘t need Unison or “Wide” here. The white noise only provides a little more pressure.

6 Gentle filter

For the amp envelope **Env 1** at the bottom left, **Attack** must be turned all the way up, **Decay** to **445**, **Sustain** to **678** and **Release** to **140**. Set **Env 3** for the Filter Envelope as follows: **Attack** all the way up, **Decay** to **370**, **Sustain** to **550** and **Release** to **500**. Make sure that the modulation intensity (**AMT**) to the cutoff next to it is only set to 850.

7 Perfecto filter

Spire‘s filter Perfecto is a lowpass filter that deserves its name. The attenuated sounds are velvety smooth and yet powerful. Set the Mode of **Filter 1** to **LP4** and the **Cutoff** to **340**. Leave **Res 1** and all settings in **Filter 2** below it unchanged, we don‘t need keytrack for this sound either.

8 X-Comp & Juno Chorus

The X-Comp compressor integrated into Spire at the bottom right provides a value of **620** for the percussive and punchy sound. Then, load Arturia‘s **Chorus Jun-6**, the effect version of the legendary chorus effect from the Juno 60. In **Chorus Mode II**, the plugin provides analog washiness and more width in the stereo image.

9 Valhalla Plate again

Attentive readers may have already noticed: I am a fan of Valhalla DSP‘s effects, especially Valhalla Plate. No other plate reverb can match how quickly you can achieve musically appropriate and extremely good-sounding results. Make sure that the reverb time (decay) isn‘t too long.

Zampler plug-in, soundset, audio demo and MIDI files: Download see Page 9

Zampler & MPC Expansion: Revenge Of The Maya Gods

Ambient Electro à la Tycho

Ready for a mysterious trip into the world of the Maya? Our latest soundbank unleashes shamanic Pads, shimmering Bells and powerful Wood Drums, accompanied by rainforest Atmospheres. Get inspired and create a captivating Ambient Electro Track with us in the style of Tycho, Sundial Aeon and Carbon Based Lifeforms!

by Mario Schumacher

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www.zamplersounds.com

Facts

Revenge Of The Maya Gods | Zampler

- 3.33 GB Soundbank
- 98 shamanic pads, shimmering bells & wooden percussion
- 10 basses
- 31 mystical pads
- 19 traditional instruments
- 26 wood & metal drums
- 12 dark effects & textures

Revenge Of The Maya Gods | Akai MPCs

- 1.63 GB expansion
- 98 shamanic pads, shimmering bells & wooden percussion
- 10 basses
- 31 mystical pads
- 19 traditional instruments
- 26 wood & metal drums
- 12 dark effects & textures

1 Develop ideas

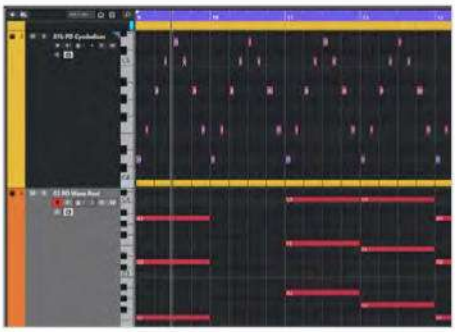
Before you get started on your own track with Revenge Of The Maya Gods, take some time to listen through the presets. Make a note of the sounds that appeal to you the most. We start our 110 BPM Ambient Electro track with an Arpeggio. Load Zampler//RX, click on **Load Bank** and select "Zampler Revenge Of The Maya Gods.fxb".

2 Musical base

Switch to **Preset 006: BS Ethnorocker**. With a little tuning, the bass is also well suited as a pluck sound. To do this, deactivate the effects and activate the Mono playback mode. Also set **Glide** to 0% and adjust the Filter and Envelope parameters as shown. In addition, remove the Assignments 1 and 3 in the Modulation Matrix.

3 Pluck layer 2

For a livelier sound, we'll bring a second layer into play. Select the metallic sound **057: PD Cymbalium** and switch off the Reverb effect. Also adjust the **Filter** and **Envelope** settings as shown in the picture. Then, route the two sounds to a bus and refine them with a dotted Stereo Delay and a lush Reverb effect.

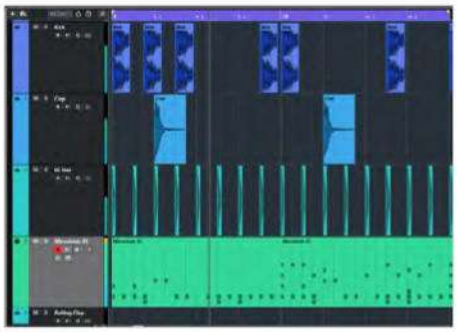


4 Arpeggio

Play an arpeggio with the sounds like the sequence shown. Now you just need the right chords. Load the **Patch 081: PD Wave Pool** and deactivate the effects. Set Cutoff to **60%**, Env to **30%** and select a **Release** value of **22%** for the **Amp Envelope**. Our chord progression consists of D minor (bar 1+2) and F and C major (bar 3+4).

5 Bassline and Accents

With Efx Fragments [1] and Blackhole [2], the dry sound becomes a shimmering texture. And what about the bass? For this we recruit u-he ACE [3]. The bass, which plays the basic notes of the chords, is joined by two other basses for accents. In the sound bank, we find suitable companions with **003: BS Bouncy** and **032: DR Thin Tube**.



6 Minimalist Beat

To leave plenty of space for the synth sounds, we program a minimalist beat using samples from Loopcloud **[4]**. Later in the track, a beat from Microtonic **[5]** is added. Fancy some cinematic accents? Be sure to try out the **Patches 039 IN Distant Horn**, **042: IN French Horn II** and **054: PD Brass Hammer**.

7 Organic melody

A dense, long reverb (for example, from Eventide Blackhole) provides cinematic intensity here. The sound bank comes with a few presets that are recommended for expressive melodies. We opt for Pad **081: Pluck PD Wave Pool**, where we set the **Amp Envelope** for a shorter decay (**Decay: 68%**, **Sustain: 0%**, **Release: 16%**).

8 Pads as accompaniment

For a spherical sound, you can give the melody an extra dose of Reverb and Delay. Pad sounds are ideal for supporting the melody shown. Good candidates are, for example, **069: PD Nature In Effect** and **064: PD Inner Peace**, which we give a dense Reverb. Effects such as Efx Fragments provide more movement in the sound.

9 Glitch effects

Want some tripping effect accents? Load a few WAV files from the soundset folder onto audio tracks, such as **IN Airy Tension**. Cut short snippets from these and run them through repeaters such as Sinevibe's Rerun **[6]**. Add a synchronized Stereo Delay and dense Reverb to give your track a cool glitch aesthetic.

[1] www.arturia.com; [2] www.eventide.com; [3] www.u-he.com; [4] www.loopcloud.com; [5] www.soniccharge.com; [6] www.sinevibes.com

Test: TASCAM Model 2400

The Model 2400 combines an analog mixing console featuring extensive routing options and integrated effects with a multitrack audio recorder and multichannel audio interface, allowing you to use all three modes simultaneously. by Jan Wilking

Features

Analog mixing console with multitrack recorder

22 Inputs

USB Audio interface (24in/22out)

5 Aux sends

4 Stereo subgroups

Built-in effects

Master effect with compressor/EQ

Bluetooth

100mm faders

Dimensions
681 x 568 x 133mm

Facts

Manufacturer: TASCAM
Web: tascam.eu
Distrib: Retailer
Price: 2,099 Euro

- ▲ Versatile in use
- ▲ Simple operation
- ▲ Very good sound quality
- ▲ Many microphone inputs
- ▲ Channel compressor
- ▲ Long analog faders
- ▲ 4 Subgroups, 5 Aux sends
- ▲ Send and master effects
- ▲ Multi-channel recording/playback

Sound:
Equipment:
Price/Perf:
Total:

Alternatives

Presonus StudioLive 32SC
2,099 Euro
presonus.com

Zoom LiveTrak L-20
899 Euro
zoomcorp.com

Mackie Onyx24
859 Euro
mackie.com

Even though modern computers with a suitable DAW and multi-channel audio interface are now very powerful, they have not yet been able to completely replace the analog mixing console. And this not only applies to use in the rehearsal room or as a stage mixer for a rock band, producers of electronic music also appreciate the direct and quick access. This applies, in particular, to modern models that also have an integrated multitrack recorder. Being able to spontaneously and directly record an idea or a complete jam with a drum machine and modular system without first having to boot up the computer, start the software and set up all the inputs and outputs is really tempting.

With the Model 2400, Tascam now presents the new flagship of its series. It combines an extensively equipped analog mixing console with a digital multi-track audio recorder and a USB multi-channel audio interface.

Analog mixing console

The Model 2400 offers a generous 22 inputs, with connection sockets on the surface and not on the back. This makes access easier and you can see at a glance which connections are assigned to what. In contrast to the Model 12, for example, it is not a digital console, but the circuits and faders are analog.

The Model 2400 offers 12 mono and 5 stereo channels which, together with the incoming stereo sum, make up the eponymous 24 channels. All channels have XLR/jack combo sockets. The first two channels also have a switchable HiZ function for low-level signals such as electric guitar or electric bass and the stereo channels have an additional jack input for the second (right-hand) channel. Phantom power can be activated in groups (four channels each) on the new model and no longer just globally. This is a great advantage, as not every microphone can cope with phantom power and you are, therefore, more flexible when connecting several different microphones.

High-quality preamps

The first 12 channels also feature the particularly high-quality preamps equipped with Tascam's Ultra-HDDA (High Definition Discrete Architecture) technology. But we were also impressed by the sound of the preamps in the rear channels, which seem to have been improved compared to the previous models.

Each channel has a control for the Input volume and a lowcut filter. Use the Mode switch to determine whether the channel should play back an instrument/microphone connected to the socket, a track from the built-in audio recorder or an audio channel looped in from your computer/DAW via USB.

Inserts and compressors per track

The first 12 channels have insert sockets for looping in an external limiter, compressor or noisegate. The Model 24 only had this luxury for channels 1 and 2. Another control adjusts the Threshold of the built-in compressor. The OneKnob compressor can also be found in each of the first 12 channels - that's very luxurious, especially for multi-channel live recordings, this effectively prevents clipping! A 3-band EQ with adjustable center frequency from 100 Hz to 6 kHz is used for equalization and sound adjustment. Each channel also has a button to switch the compressor and equalizer to bypass, very practical!

Long faders, flexible routing

This is followed by a generous 5 Aux controls for monitor mixes and for integrating external effects, whereby Aux 4 can also be switched to pre-fader and Aux 5 can be used as a send control for the internal effects unit. The channel is rounded off by

The housing, which is slanted towards the user, makes operation easier and also looks stylish with the side applications.

The color-coded Master Section with recorder and effects, as well as faders for the subgroups.

a beautifully long 100mm volume fader. In addition to the fader, there are four switches for routing the input signal to the Stereo Sum or one of the four Subgroups and for activating Pre-Fader Monitoring.

The stereo channels lack a Compressor and mid-band control. The last stereo channel has no EQ at all, but can be supplied with audio signals from smartphones and tablets via Bluetooth.

Subgroups and Aux paths

The master section, which has faders for the four stereo subgroups and the stereo sum, is color-coded on the far right. The subgroups allow, for example, the joint control of all drum channels and all vocal tracks with just one fader each. The stereo sum is picked up via balanced XLR connections, while balanced jack sockets are available for the other channels. On the rear panel, you will find a total of four stereo outputs for the subgroups, 5 mono outputs for the aux paths, as well as control room outputs and a send/return connection. There is also a convenient and very practical click output for live use and a footswitch connection for starting the recording when you have no hands free.

MIDI and USB

MIDI IN/OUT is also on board, as is USB. MIDI offers you synchronization to external equipment via MIDI time code and MIDI clock with support for the song position pointer (SPP); and Model 2400 can also generate MIDI time code and MIDI clock itself and output it via MIDI and USB. Fortunately, the power supply is provided by an internal power supply unit, which is connected via an IEC cable.

Send and Master effects

The built-in effects unit offers 16 different reverb, delay and modulation effects, but can only produce one effect at a time (although there are at least combination effects with delay and reverb or chorus and reverb) and is fed via the Send controls (Aux 5) of the channels. Four effect paths for external effects are also available.

While the Tascam Model 24 only has a graphic 7-band EQ for quick adjustment of the sound image to the PA and the room, the master section of the Model 2400 is much more generously equipped. There is a master compressor that can be adjusted directly via 5 controls in the relevant parameters threshold, ratio, attack, release and makeup. There is also a 4-band equalizer with shelving filters for the low and high frequencies, as well as fully parametric mids, which can be adjusted using the clear display and the associated navigation buttons.

Robust and compact

Such an extensive range of functions and controls naturally requires some space, but with dimensions of 681 x 568 x 133 mm and a weight of 14 kg, the Model 2400 is still reasonably portable and can be clamped under the arm to transport it to your rehearsal room or to a jam or gig. We think the design, with its color-coded section boundaries and its wood-look side panels is quite appealing, and there's nothing to complain about the with the robust workmanship either.

Can be used simultaneously as a mixer, recorder and interface

The outstanding feature of the Tascam Model 2400 is the straightforward combination of mixing console, recorder and audio interface. For each channel, you can individually select whether the input signal is fed from the physical connections, the audio recorder or the computer connected via USB. You can also listen to the internally recorded signal via the channel and, after pressing the rec button, record an instrument on the channel (punch in/out) or add a voice as an overdub.

Straightforward multi-channel recorder

Each channel can be recorded directly in the Model 2400, for which only an SD card is required. Alternatively, or in parallel if required, multi-track recording is possible in the DAW over USB, with a maximum resolution of 24bit/48kHz.

The display always shows several channels simultaneously for checking and also provides a time display. There are useful functions such as normalizing, being able to set markers and being able to undo edits. Its operation is intuitive and requires barely any training time, which demonstrates Tascam's decades of experience with audio recorders!

Practical features

There is an additional optimized mode for streaming, where the audio signal can be delayed in milliseconds to synchronize it with the streaming picture. Here, too, you can see the practicality that runs through the entire configuration and operating concept of the Model 2400.

In terms of sound, the Model 2400 proved to be inconspicuous in a positive sense during the practical test. The microphone preamps coped with low-level signals, as well as very loud input signals, and the sound of the recordings was transparent and powerful.

Limited DAW controller

The Model 2400 can also be used as a controller for your DAW, although this is not mentioned as explicitly as with the Model 12, for example. This is probably because the faders are not available for controlling the channels in the DAW, as they are analog and not digital faders as described above. However, transport buttons, record buttons and the like are available for DAW control.

Verdict

The strengths of the Model 2400 lie in its ease of use and versatility. Even as an analog mixing console with many microphone inputs, one-knob compressor on most channels, long faders, flexible routing and built-in effects unit, the Model 2400 is a great choice. The audio recorder allows seamless multi-channel recordings in the rehearsal room, when jamming or on stage, making a computer superfluous. Even projects from your DAW can be transferred to the mixer on multiple tracks and used as live playback or supplemented with instrument or vocal recordings. In the desktop studio, on the other hand, the USB audio interface is practical for multi-channel recordings in your DAW. The Model 2400 may not be a bargain, but the price is very fair considering the features on offer.

The rear is dedicated to the numerous outputs, while the input jacks are located on the top of the mixer.

More Info

Test: PWM Mantis

PWM Mantis is a new exception among synthesizers. The successor to the Malevolent is, in many ways, easier to use than other synthesizers and is the latest concept from a great synthesizer designer. by Heiner Kruse

Features

- Duophonic sound generation with digital oscillators
- Option for four-part use
- Analog multimode filter
- Modulation matrix
- 200 presets
- Integrated reverb and chorus efects
- MIDI controller with USB-C connection
- Joystick
- 37 key velocity-sensitive keyboard
- Dimensions: 62 x 32 x 11cm

Facts

Manufacturer: PWM
Web: 1pwm.com
Distrib.: Hyper Active
Price: 1599 Euro

- ▲ Variable sound generation with wavetables
- ▲ Good sounding filter
- ▲ Good presets
- ▲ Envelopes with loop mode
- ▲ Interesting sound thickening with Density control
- ▲ Arp with Swing and joystick w/ Hold options
- ▼ Slightly high price

Operation:
Workmanship:
Price/Perf:
Rating:

Alternatives

Oberheim Teo 5
1699 Euro
oberheim.com

Korg Minilogue XD
699 Euro
korg.com

Novation Summit
2099 Euro
novationmusic.com

There are already many synthesizers in the world. So what does Mantis intend to do better and differently than others? First of all, its operating concept without a display is characteristic. With two rows of ten buttons each, you can switch between 200 presets on Mantis. Among the first ten are two that sound like the French band "Air", but Mantis can also sound like an organ, TB-303, vowel filter, a harp or even something distorted. I first received Mantis late, but then had it in my studio for longer than planned and was able to tease out more and more interesting sounds as I went along. The sound generation uses high-resolution digital oscillators that are capable of virtual analog, wavetable-based and additive sounds. These can then be processed by an analog signal path with a Multimode Filter that has it all. Between these two is a mixer that can have a little more influence on the sound design than others. This is followed by an effects section with a very special (mono) reverb and chorus. Both can add spice to the sounds - especially if you are looking for a vintage aesthetic.

History

Paul Whittington is an unconventional and communicative guy who not only worked at Novation himself, but was also able to win over the company's iconic developer Chris Huggett for his project. He is not only responsible for Novation's Peak and Summit, but also for the Wasp and OSCar classics. Mantis is the second synth released after Melevolent by Paul's small but excellent company. Conceptual similarities to Huggett's other masterpieces on the one hand and PWM's debut on the other can definitely be recognized. Peak and Summit also use digital sound generation with a wavetable option and analog filters. The death of Chris Huggett unfortunately delayed the completion of the Mantis, as well as making it his final legacy.

External impact and first steps

Externally, however, there are more similarities with Malevolent; for example, in terms of the removable side panels, the play with the green color, the joystick and the design of the buttons. Unlike Malevolent, however, Mantis has presets. However, this also means that the controller settings do not always correspond to the settings heard. Values sometimes have to be "fetched" first. On the other hand, there are no menus and almost all settings can be accessed directly.

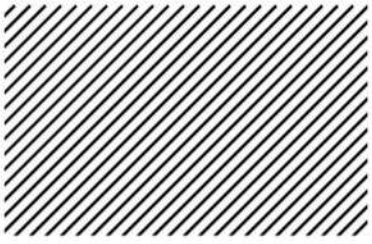
Sound generation

The two oscillators can be tuned over six octaves, with only the second allowing fine tuning in semitones and cents. Both have shape controls, which sometimes have a wavefolding character, as well as Shape Mod and Pitch Mod. Novation is known for the particularly fine resolution of its digital Oxford oscillators, which Huggett worked on, so it's no wonder that the Mantis oscillators also sound very good. In addition to the four basic waveforms, which can be selected by means of a switch on the oscillator, there is a kind of "Organ Waveform" (in the sense of Additive Synthesis) and then the "Wavetable" switch setting. Osc 1 also has a sub-oscillator; and there is also an Oscillator Drift control for a more analog sound. The Density setting turns one oscillator into two, in a sense, which can be detuned against each other to make the sound fatter.

The mixer has Osc Mix, Ring Mod and Noise controls. By holding down the Shift button, you can set how much signal reaches the Filter. This transforms the noise signal into a bit-reduced crackle, for example. An Osc-Sync option is missing, but using Ring Mod and Density, a great variety of sounds are possible, which can even go in the direction of bell sounds.

The filters have a dual design, they can act as a filter pair or stereo filter. The Drive, Width and Width Mod parameters are special features here.

There are eight different settings to choose from, three of which are 12 dB Filters (LP, BP, HP), which then appear three more times as series-connected variants at 24 dB, before the Wide Band and Wide Notch entries follow. The words "Duophonic" are also emblazoned next to the 12dB variants. Here, the filters are used in parallel, making the gaps between the filter frequencies more audible. If you then turn up the "Spread" option from the Voicing Section, differently resonating sound components are distributed even more widely across the two stereo channels, which can have a fascinating effect.



You can switch between the inspiring presets using 20 buttons arranged in two rows.

In the Voicing Section, the Duophonic, as well as a Quad Mode, can be activated to use the structure with slight restrictions for up to four-part sounds. However, the 24dB options are then no longer available in both cases. The result of a comparison of 2-pole (12 dB) and 4-pole (24 dB) Filters can be very different with different synths. The 24 dB Filter on Mantis usually makes the sound a little warmer and stronger, but turning up the resonance makes it less intrusive. This also applies to lower frequencies. The sound can also approach the sound of a Korg MS 20. It doesn't take much to turn an Init sound into a fat bass or pleasantly distorted lead sound in Mantis - a little Oscillator detuning, a little Filter Drive and Resonance and it sounds fat.

Modulation and Shift tricks

Two separate LFOs with different waveforms do their job in Mantis. With the help of a Fade-in function or the fade control, the effect of a modulation can also be introduced slowly and with a delay in order to add more movement to the sounds - an effect that I have often used with D&B Basses. You still have your hands free.

Mantis has a whole range of hidden Shift Functions, which so far have mainly been communicated via videos and only partially in the short manual. This initially confused me when I first tried to understand the synth as a whole, but the fog has now lifted. After all, buyers of this synthesizer can always discover surprising new goodies in their Mantis. This includes, for example, the option of bringing the LFOs into a One Shot Mode via Shift + Sync. As the two envelopes can also be looped, a set of four variable modulation sources is ultimately available. In principle, LFOs are designed to modulate repeatedly, while envelopes run through once; here, both can also do the other. There is also a triggering section that allows you to set the two envelopes separately to a legato mode or the LFOs to a retriggering mode. Fast looping envelopes with short times can certainly

Who needs a display? All functions of the Mantis can be accessed directly via the clear user interface.

compete with LFOs that do not penetrate quite as far into high frequency ranges. The envelopes also have an additional Sustain Fall parameter compared to standard ADSRs in order to add further movement to the sound when the key is held down. The modulation matrix can be configured in the lower controller area and above the keyboard. Six modulation destinations with six sources and six scaling options are available there. The destinations are called: Osc1 Shape, Osc 1 Pitch, Filter Cutoff, Osc 2 Shape, Osc 2 Pitch and Filter Resonance. These parameters seem familiar - don't they already have a mod pot elsewhere? Yes, for these the modulation intensity of the source(s) from the matrix can be controlled separately in the respective range via the mod control. In this way, the function of the modulation matrix is somewhat reduced. However, everything is directly accessible without any menu nesting.

Env1, Env2, LFO 1, LFO2 and Note can be selected as modulation sources, and Joystick X, Joystick Y, Velocity, pedal and aftertouch can be selected as scale options. The modulation can be scaled with a scale parameter. However, like the source, this can also have a direct effect if the sixth option, "Full On", is selected.

Effects

The reverb section seems to me to be a little misunderstood in some tests. It sounds a bit like a spring reverb - and when "Time" is turned way up - even a bit like a delay with slight modulation. It is, perhaps, a pity that the reverb can only sound in mono; but on the other hand, this also suits many sounds and gives them a certain retro charm. That seems to me to be the purpose of the effect. It is definitely helpful that a button can be used to activate a highpass and a lowpass filter to tame the reverb somewhat, although the frequency cannot be adjusted. Four modes with different intensities and a level control are available for the chorus effect.

More Info

Joystick & Arp

A kind of hold function can be activated by pulling the joystick down. This helps, for example, if you want to hold arpeggios and play something in addition. This works particularly well when Quad Mode is activated, allowing you to play entire chords in addition to the strumming arpeggio. The arpeggiator is also capable of tap tempo and swing settings. The latter is quite a rarity and can be very useful in practice if you want the arp lines to match beats that are not quite so straight.

Whether the hold function is active permanently or only during the pull-down depends on whether the joystick was pressed beforehand. A mode button is also included to set different pitch bend ranges and vibrato modes.

Preset management, storage, other

The option to start with an empty, initialized preset or to get completely random presets via Shift + Random/ Compare is very practical. The 100 presets in Bank A are locked by default, which can be unlocked by pressing Shift + Bank. I think it's great that you can listen to or play the selected target preset slot before saving it to check which sound will be overwritten. In the master section, you'll find a glide option and a master tuning control to be able to hit every intermediate note in a synthesizer orchestra despite digital voicing precision.

VERDICT

PWM Mantis is a sonically versatile synthesizer that shows the ingenuity and experience of its developers, Chris Huggett and Paul Whittington, in many places. The operating concept is very direct and mature, even if there are still some hidden Shift Options. In many places, such as the preset storage, the Filters and the modulation matrix, you will find workflow solutions that you would wish for elsewhere. The analog filter section, in particular, sets Mantis apart from the competition in terms of sound; I have yet to find such filter sound nuances elsewhere. But the creative oscillator range is also impressive. At the same time, the good usability is also the result of a somewhat reduced concept. PWM Mantis has, therefore, become a synthesizer with a very unique character that has earned its fan base. However, the pleasure does not come cheap.

Test: Roland AIRA Compact P-6

Roland is expanding its AIRA Compact series. After two synthesizers, a groove box and a voice box, the P-6 is a creative sampler with surprisingly extensive functions. by Jan Wilking

Features

- Ultra-compact sampler
- 16 voices polyphonic
- 6 parts with sample pads
- polyphonic granular mode
- Performance effects
- Resampling with effects
- Sampling via internal microphone or line
- 64 step sequencer
- USB-C port for audio/MIDI

Facts

Manufacturer: Roland
Web: roland.com
Distribution: Retailers
Price: 199 Euro

- ▲ Direct sampling
- ▲ Granular engine
- ▲ Chopping
- ▲ Extensively editable
- ▲ Sequencer
- ▲ Performance effects
- ▲ Compact and inexpensive
- ▲ Battery operation
- ▲ USB audio interface
- ▼ Short sampling times
- ▼ No real display

Sound:
Processing:
Price/perf.:
Total:

Alternatives

TE PO-33/EP-133 K.O. II
from 99 Euro
teenage.engineering

Sonicware LIVEN Lofi-12
239 Euro
sonicware.eu

Microgranny Monolith
269 Euro
bastl-instruments.com

P-6 combines proven sampling technology with modern granular sound design and a powerful sequencer in a pocket-sized device. Equipped with an integrated microphone, intuitive controls, effects, USB-C and internal battery, the P-6 aims to impress with exceptional sampling and performance options. We have checked whether the P-6 can also fulfill the marketing promises in practice.

» Under the hood, the P-6 offers amazingly extensive detail processing and plenty of scope for experimentation! «

AIRA Compact Series

The AIRA Compact Series started with three different instruments that are designed to complement each other: T-8 is a small groovebox and combines a TR drum computer with a bass synthesizer inspired by the TB-303 and a matching sequencer. J-6 is a four-voice polyphonic synthesizer based on the Juno-60 with various chord sets and arpeggios for interesting harmonies and melodies. The third in the group is the E-4 Voice Tweaker, which offers a variety of effects from vocoder to harmonizer and looper to a scatter for rhythmically chopping up the input signal. A fourth model was added a little later, which was based on the analog mono synthesizer Roland SH-101 from 1982, which was known primarily for its distinctive bass and lead sounds.

Ultra-compact and lightweight

The housing of the P-6 has the same dimensions as the other AIRA Compact devices. At approx. 19 x 11 x 4 cm, it is about as wide as the Korg Volcas, but a little less deep and high and, at around 300 grams, also lighter. Unfortunately, this model also has a four-digit 7-segment display, so only numbers such as tempo and preset number as well as simple abbreviations and character sequences can be displayed. The samples must therefore be edited by ear; the P-6 does not offer a waveform display or similar visual convenience. Or you can use the free SampleTool for Mac OS or Windows.

USB-C for MIDI/Audio

As with the other compact Roland devices, there is only a 3.5mm mini jack headphone connection as an audio output, located top right next to the small

A proper display and more legible prints on the buttons would have made operation much easier.

volume control. Alternatively, the audio signal can also be tapped digitally via the USB-C connection and integrated into the DAW without loss. The P-6 functions as a 2in/2out audio interface and can also be powered via USB. The latter can be deactivated to save the battery of the connected mobile device such as an iPad or iPhone and to avoid error messages due to excessive power consumption. In this case, the Roland synthesizer receives power from its built-in battery.

Audio inputs

The mix input allows you to loop in an external sound generator, whose audio signal is passed on to the output unprocessed. The input is therefore used to listen to the synthesizers and grooveboxes together without an additional mixer or to add playback from a mobile device without additional cabling. With the P-6, you can also record your own samples via the line input, as well as via the headphone output when using a headset with a microphone.

Fully MIDI controllable

The P-6 also has MIDI input and output, but only as a mini jack (TRS-A). Adapters are required to connect to devices with a 5-pin MIDI DIN. However, the T-8, J-6, E-4 and S-1 can be linked to each other with a simple stereo mini jack cable to synchronize the tempo or, for example, to play the P-6 with the chord sets of the J-6. There are also two sockets for analog synchronization for this purpose. The controllers send and receive MIDI CC and can thus be automated in the DAW.

Extensive features

The sampler's features are quite extensive considering its compact dimensions and low price. There are various bit rates to choose from, sample chopping, granular editing, combined with a sequencer and built-in effects. P-6 can also be played polyphonically with up to 16 voices, which also allows for massive chords. There are also four voices for the granular engine.

Direct sampling

In contrast to Elektron's Model:Sample or Korg Volca Sample, the P-6 is a real sampler: samples can not only be imported, but also recorded directly via the built-in microphone or line input. This greatly expands the creative potential, especially in mobile use, as any interesting noise or sound can be captured, edited and integrated into the sound generation without any detours. The sampling process is simple and intuitive: in principle, all you need to do is press the sample button, so any sound can be captured spontaneously.

Short sampling times

Samples can be recorded in mono or stereo, although at the highest resolution of 44.1 kHz, unfortunately only 3 seconds are available for a single stereo sample. This is sufficient for one-shots, but it quickly becomes too little for loops. With the current prices and sizes of memory chips, this limitation no longer seems quite up to date. The bit rate can be gradually reduced to 11 kHz, then you have a maximum of 23 seconds of mono per sample available, but with correspondingly reduced sound quality (which can also be quite interesting for chip and lo-fi sounds depending on the application).

Pads and buttons

Up to 48 samples can be saved in 8 banks, 6 of which can be triggered directly using the slightly larger pads. A total of 140 seconds of sample time is available at the highest resolution, and significantly more at the lower resolution. Individual samples can be split into up to 64 parts, which you can trigger using the 16 smaller buttons below the pads. Like the pads, they are illuminated and show the trigger, although the LEDs could be a little brighter for our taste - especially for outdoor use in bright surroundings. The 16 buttons can also be used as a chromatic mini keyboard. However, neither the pads nor the buttons are velocity-sensitive, but the samples can be played dynamically using an external keyboard.

Classic sampler functions

Samples can be edited in terms of pitch, volume and filter as well as the associated envelopes, just like with a classic sampler/synthesizer. This has to be done using the buttons, the value control and the small display and is therefore relatively fiddly. The seven small controls that are actually intended for the effect parameters and the basic pitch, the start and end point of the sample and the level can also be used for this. However, this requires a bit of thinking and experimentation, as the secondary functions are not printed (e.g. the last four controls control attack, decay, sustain and release when the envelope is selected) and the cryptic abbreviations on the display are not always understandable. Since these are not endless controls, the position when switching does not always have to be correct, which can also be confusing.

Step sequencer with extras

The parameters can also be automated in the sequencer, with sample start modulations in particular producing exciting results with longer samples. This is a classic step sequencer in TR style. You can select individual steps using the 16 horizontally arranged buttons, and the lighting of the steps serves as a running light. A pattern can be up to 64 steps long, and 64 patterns can be stored internally. Probability, note length and micro-timing/sub-steps can be edited for each step.

The built-in microphone and the many post-processing functions invite you to directly sample and experiment.

With the P-6 SampleTool for MacOS and Windows you can transfer samples and edit them in detail.

You can play your own sequences live with a metronome and quantization using the pads or an external keyboard, or you can enter them in TR style using the buttons. The same applies to automation; controller movements can be recorded in real time or set individually for each step (parameter lock).

Performance effects

The performance effects looper, pitchshifter, delay, filter, Scatter and MFX are arranged centrally in the upper area. These can act on all or individual samples and can be changed directly in selected parameters using the three associated mini controls. MFX offers a selection of different effects, from chorus to compressor to LoFi and bitcrusher. There is also a global delay/reverb effect.

Sample chopping

Instead of playing a sample chromatically on the keyboard, you can also cut it into any number of individual parts. This is particularly easy to do with correctly cut loops, by simply entering the number of chops into which the sample should be divided. Then you no longer play the sample tonally with the 16 lower buttons, but instead trigger the individual chops. This naturally works best with rhythmically correctly cut drum loops at the right tempo, but is also fun with vocal licks, melodies and other sounds.

Live chopping

Chops can also be created directly when recording the sample. To do this, activate step sampling and then play various audio signals into the input. At the touch of a button, the P-6 makes a new chop for each individual sound. This way, for example, an external analog drum computer can be recorded instrument by instrument and then played directly as a drum kit using the small buttons.

Granular mode

Samples can also be assigned to the granular engine. The sample is also split into small to very small parts, which are then looped and repeated quickly. Depending on the length of the individual grains, this creates stutter effects or completely new sounds and textures in which you can hardly hear the original sample. You can use the controls to control the starting point and the length of the grains, and pitch to control the pitch of the tones. This direct access invites you to experiment and allows you to playfully change the often difficult-to-predict results of granular processing.

No time stretching

The Granular Engine also offers numerous other setting options under the hood, but as in the other areas, this requires a bit of patience due to the menu control. There is no classic time stretching for quickly adjusting loops to the song tempo. The P-6 is more of an expert at taking longer samples apart and reassembling them.

In addition to the analog inputs and outputs, audio and MIDI can also be sent and received via USB.

More info

VERDICT

The P-6 not only perfectly complements Roland's Compact series, but also offers an incredible number of functions in a small space. The small box enables direct, intuitive sampling and easy post-processing using the small controls. In combination with the chopping and granular engine, the sequencer and the automation options as well as the performance effects, interesting patterns can be created quickly and easily, especially since the samples can also be played polyphonically. But it doesn't stop there, because under the hood the P-6 offers an astonishingly extensive range of detailed editing and plenty of scope for experimentation. At this point at the latest it gets quite fiddly due to the small controls and the rudimentary display, but using the additional functions is also optional. Roland could have given the P-6 a little more memory for longer samples.

Test: Golden Master Pedal

We think we're seeing a trend of pedals becoming more popular and appealing to a wider audience. Several Eurorack manufacturers have already released pedals this year. Endorphin.es is at the forefront here and has now released the Golden Master as a stompbox alongside Ghost. But an end-of-chain effect as a floor pedal - can it work and for whom is it suitable? by Daniel Bock

Known as a Eurorack module and with a design inspired by studio hardware from the 90s, the Golden Master Pedal offers EQ, Compressor and Mid/Side processing for three frequency bands and is recommended, at first glance, for end-of-chain applications.

Appearances: Optics & Haptics

The first impression is positive. The workmanship is high quality and stable. The compact metal housing is easy to imagine on the pedalboard. The potentiometers for Volume, Master Threshold, Input Gain and the three bands run with pleasant resistance and no play. The bypass and preset switch work "clickless". The panel also features three Mute buttons for the bands, a Mode button for selecting the effect and a button for the VU Meter. On the front panel, we find the 6.35 mm jack Input and Output pairs, the Expression / Sidechain In and the Power Supply connection.

Inner Values I: Saturation & EQ

After the input, the signal runs through a digital Saturation stage that can boost by up to +10db. Equalization is definitely possible here. The EQ covers a wide range (bass 20 - 300Hz, mid 300Hz - 3000Hz, treble 3000Hz - 20,000Hz). It works asymmetrically with a boost per band of up to +8dB or a cut of up to -20dB.

Inner Values II: Compressor

Attack (50ms - 14ms), Release (1500ms - 150ms), Ratio (1;1.25 - 1:4) and Threshold (-12db to -20db) are scrolled from left (soft compression) to right (hard compression) using a button. In addition, the Master Threshold can be controlled for all bands simultaneously. Different compression of the frequencies makes it possible to make detailed adjustments to the sound - an unusual feature for a stompbox!

USB controllers such as the Nanopad2 can be connected directly to the black box.

Inner Values III: Mid/Side & Output

The stereo image is also processed using the three band controls. At the left stop, the selected band is centered (mono). A "normal" stereo image is obtained when centered. At the right stop, the stereo image is widened. This function is ideal for complex live mixes. Kicks and basses can be placed in the middle and, for example, pads or effects can be placed wide in the panorama. Widening the sounds works better with real stereo signals and is then really fun. The result is output via "pseudo-balanced" outputs. These allow the pedal to be used as a DI box, which is interesting for bassists, for example.

Intuitive jam and live suitability

The mute switches per band are very useful for adjusting the settings in isolation, but are also a great performance feature. The latter is supplemented by the Expression In. Audio for sidechaining can be connected here or a controller whose mode of operation can be configured. In addition, three presets can be saved and recalled via the footswitches. However, a shift menu with multiple assignment of knobs and buttons is unavoidable given the compactness and number of options. However, it is clearly laid out and easy to understand. The secondary functions are selected via the VU button, which, for example, provides the Dry/Wet Mix when the volume control is moved. All sound changes can, therefore, be mixed in parallel.

Verdict

The Golden Master Pedal is one of those parts you didn't know you needed before checking out. Its functionality is unrivaled in this combination and compactness, and can only be replaced by several stompboxes or bulky rack equipment. The versatile application possibilities, for instance, as a DI box for the electric bass, as an option for the guitar pedalboard or as an end-of-chain sound refiner for the groovebox and the overall mix, make the Golden Master Pedal the perfect choice for the multi-instrument home studio. Live musicians will benefit from the performance options and the ability to polish the live mix in detail. Anyone who works primarily with the computer will be able to cover this functionality elsewhere. For everyone else, this little box is highly recommended. ::

More Info

Features

- Stereo multiband processor in pedal format
- 24-Bit-96-kHz audio I/O
- One-knob compressor with limiter per band
- 3 Band EQ
- Mid/Side processor
- Mute button per band
- VU meter
- Three presets saveable
- Can be used as a DI box

Facts

Manuf: Endorphin.es
Web: endorphin.es
Distribution: Website
Price: 349 Euro

- ▲ High-quality workmanship
- ▲ Intuitive operation
- ▲ Effective sound enhancement of the output signal
- ▲ Performance suitability
- ▲ Presets can be saved
- ▲ Parallel mixing: Adjustable dry/wet ratio

Sound:
Operation:
Price/Perf:
Total:

Alternatives

JHS Pedals – Colour Box V2
499 Euro
jhspedals.info

Strymon – Deco V2
429 Euro
strymon.net

Power Producer: Ableton Push

Avoid parameter chaos

Editing sounds with effects on stage can be a challenge. Which menu was the parameter in again? And if you want to modify several at once, it gets confusing anyway. With Live 12.1, you can now map parameters to Macros in Push and have immediate access to the desired parameter selection. You can find out how this works here! by Maya C. Sternel

Project info

Material: Ableton Live 12.1, Ableton Push 3 / Push 3 Standalone
Time required: 30 minutes
Content: Extended Macro Control functions since firmware update 2.1, assign any parameters to Macro Controls, edit Macro Mappings afterwards, create and call up randomly generated Macro variations.
Difficulty: Advanced

1 Group devices

To use Macros, first group a device or a chain of devices in a track, e.g. the synth drift with an echo. Select a track. Then, hold down the **Shift** key and select one or more devices using the buttons above the display. In the context menu that now appears, select **Group**.

2 Select parameters

For example, to map the Delay Time of the Echo to a Macro, go to the Main menu of the Echo. Tap on the rotary control assigned to **L Division**. As long as you touch it, the **Map** option will appear in the bottom right-hand corner of the display. Activate this option. You will now see 8 Macro controls on the display. Use Page 2 to call up Macros 9 to 16.

3 Assign macro

Move the rotary control above the Macro to which the parameter is to be mapped. Then, select the **Done** option. Macros can also be assigned multiple times. To assign key-based parameters to Macros, for example, to switch Echo completely on or off, press the button above Echo in the upper display line in the Devices overview.

4 Button-based control

Press and hold the button and then activate the Map function again. Select a Macro and finish with **Done**. If you now turn the control, the device, or Echo in this case, is deactivated as long as the value remains below 64. Above 64, the device is activated. In the overview line at the top of the display, Echo lights up in the track color as soon as the device is active.

5 Edit macros

To edit Macros, touch the rotary control assigned to Macros and activate the **Edit** option at the top right using the button above. On the far left, use the rotary control to select the Macro to be edited. You can set minimum and maximum values for the individual parameter mappings, rename the Macro or delete the mapping.

6 Macro variants

You can also create Macro variations. To save a Macro setting and recall it later, press the jog wheel in the Macro Control menu. If you turn it slightly to the right, you can create random settings by pressing the jog wheel. These appear to the right and can be selected and activated using the jog wheel.

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1

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Giveaway worth 339 €

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2

Giveaway worth 79 €

Omnitronic * GNOME-202P Mini-Mixer

The GNOME-202P takes the popular mini mixer series to a new level: Equipped with a Bluetooth function and an MP3 player, it is the perfect backup solution for the mobile DJ. Whether at a spontaneous DJ gig at the WG-Party or in the gastronomy: For this extremely light and compact DJ mixer there is a place everywhere. It has 2 stereo channels with gain control and 2-band EQ. A microphone input is also on board and allows announcements during a DJ set.

Check it out

3

66 % on DRUMZ with code ADVENTDRUMZ

ZamplerSounds * Patches for Zampler & MPCs

If you're in search for special sounds, exclusive treatment is the key. But did you ever try playing your drums and percussions like instruments instead within static rhythms? That's where DRUMZ is here to help! Featuring 93 colourful drum and percussion sounds that can be played chromatically on your keyboard makes all drums feel like instruments. On top you'll find 85 classic kits and 209 Tempest & Aira loops for good measure. Drum roll, please!

Check it out

Intech Studio * TEK2 for Grid

4

20 % saved with code BEATADVENT2024

Welcome to TEK2, the freshest Grid module equipped with a pair of endless rotary jog wheels and eight clicky buttons. TEK2 is a gateway modular controller from audio to video editing, offering a 5-point multicolor LED feedback and massive knobs with a two-state switch (pressed & released) in addition to their smooth endless turn. The programmable '5-bit display' indicator is perfect for giving feedback on centered or starting value positions and highlighting parameter states.

The TEK2 controller is aimed at professional musicians, producers and DJs looking for a flexible, customizable control solution to enhance their music production and live performances. Overall, the TEK2 from Intech is a versatile and powerful solution for anyone who needs customized control over their music software. «

Check it out

5

Giveaway worth 119 €

Yamaha * YDM505

The dynamic microphones in the Yamaha YDM series not only look really smart, they also have a lot to offer. They are ideal for a wide range of applications, including vocal recordings, guitar amplifier miking, drums and other instruments. Podcasts and live streams can also be easily realized. So entering the giveaway is a no-brainer!

Check it out

6

50 % saved with code BEAT-PEELSTEMS

PEEL STEMS * Real-time stem separation

Isolate instruments or vocals – and remix, rebalance or remove stems in already mixed audio. All in real-time. PEEL STEMS is based on zplane's new STEMS EFFICIENT technology and highly optimized for real-time low-latency processing. Simply bring it up as an insert on a track, and get creative with mixed audio as if you had access to its separate tracks. So now, removing vocals or bass in a loop is as simple as muting that stem while you are playing it back!

Check it out

7

Giveaway with 35 Drum Groove Stems by Moses Schneider

3 x elysia * Human Beat Pack 2

Welcome to the world of THE HUMAN BEAT PACK Volume 2! We want to give you even more cool and innovative grooves to play with and get creative with. Cut them, combine them and mix them to your own unique taste. You'll get the raw session multitrack of that specific groove. Enjoy your new groove and get creative - the possibilities are endless!

Check it out

8

44 % on all packs with code BEATMAG

Drum Depot * Your source for drums

Drum Depot packs strongly focus on niche drum machines and modules with exclusive sound. Even the classic Analog 808 pack includes extremely processed drums, resulting in samples you won't find anywhere else. Stylewise these drums are compatible Techno, Electro, Drum & Bass, Ambient, Trap, Glitch, Hardtek, Gabber, EBM and Industrial. All kits come in WAVformat and thus are compatible to almost every sampler on this planet (possibly except your fancy Amiga tracker). Including expansions for current Akai MPCs..

Check it out

9

15 % Valid until 31.01.2025 with code TRAUMSTUDIO15

GIK * Free room analytics + coupon code

Are you having trouble figuring out how to acoustically optimize your room? Are you unsure which GIK product is best for you? Not sure how to install the acoustic product in your room? GIK Acoustics will be happy to guide you through the entire process. Let a trained acoustician design the best acoustic concept for your studio!

At GIK you get a holistic acoustic treatment: In addition to a personal and free consultation for your future studio, you will also receive a voucher for your shopping tour in the GIK Acoustics online store. Get it! «

Check it out

10

Giveaway worth 349 €

Apogee * HypeMic

Apogee's compact USB microphone is very similar to the Apogee MiC Plus, but has an additional built-in analogue compressor with three presets and an extended delivery range. The HypeMiC is a very compact microphone with professional sound and character. Not only does it sound fine for voice recordings, but those recordings also benefit from its integrated compressor when used at moderate settings.

Check it out

11

30 % saved with code BEATMAG

Baby Audio * ATOMS

Atmospheric, dynamic and with a pinch of stubbornness – Atoms from Baby Audio presents itself as a physical modeling synthesizer that plays to its strengths in the organic and surreal world of sound. The palette ranges from sounds reminiscent of traditional instruments such as guitars, violins or pianos to pulsating and lively hybrid sounds. The sound of the synthesizer is lively, expressive and always in flux.

Check it out

12

Para + Para S * Keyboard stands with 3 levels

The Para and Para S keyboard stands from Black Panther are an excellent choice for musicians who value stability, design and functionality. They offer a professional solution for setting up keyboards, both live and in the studio. The only difference between the two is an 8-way socket strip, which is built into the Para S.

15 % discount with code BEAT15

When I tried out the Para and Para S keyboard stands from Black Panther, I was impressed by their combination of stability and attractive design. Both stands are made of sturdy materials that could easily support my heavy keyboard, which made me feel safe during live performances. «

Check it out

13

Giveaway worth 490 €

Erica Synths * LXR-02 Drum Synthesizer

Sonic Potions and Erica Synths joined efforts to develop a drum machine that would stand apart from the masses and the LXR-02 was born. The LXR is a full-fledged digital drum machine with an integrated sequencer. Its sound engine provides 6 different instruments, each with over 30 parameters to tweak, producing sounds from classic analog emulations to crunchy digital mayhem, thus offering some of the most extensive sound design capabilities found on a drum synthesizer.

Check it out

14

30 € save with code BEATADV2024

DigitalPHOTO+ * Annual sub

DigitalPHOTO+ is the digital subscription flat rate of our Beat sister magazine DigitalPHOTO. With exclusive, independent tests, tips and advice for all photographers – whether beginners or professionals! The subscription includes over 300 issues and special editions as e-paper, digitalphoto.de without advertising banners and the DigitalPHOTO best list with over 840 camera and lens tests. All services in German language only. The subscription is automatically renewed after 12 months at full price..

Check it out

15

Giveaway worth 119 €

Yamaha * YCM01U USB mic

Setting up your streaming setup has never been easier. No driver is required – simply connect the supplied USB cable to your computer or iOS device and you're ready to go. Operation is just as simple: intuitive volume control of your voice and the person(s) you are communicating with is done via a single control on the microphone housing. Headphones/earphones can be connected directly to the stereo mini jack on the back of the microphone.

Check it out

16

Giveaway worth 207 €

Audient * iD14 MKII

Designed to take your recordings to the next level in every way, the iD14 (MKII) delivers professional audio performance in a compact and modern desktop package, giving you everything you need to make studio quality recordings at home. The Audient mic pre is a high grade hybrid discrete and op amp design that delivers a clean, accurate and detailed translation of your source.

Check it out

17

80 % discount with order number ML23PAE

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Besser hören dank AirPods
Welches Modell zu dir passt

MacLife * Trial sub

Our colleagues at Mac Life offer you the opportunity to get to know the world of Apple products with an exclusive trial subscription at a reduced price. With independent tests, helpful tips and useful guides for all Apple fans – whether newcomer or pro, whether MacBook, iPhone or Apple Watch! The trial sub contains three issues including e-paper for just 5.90 euros instead of 27 euros!

Check it out

18

50 % saved with code BEAT-RETUNE

zplane RETUNE * polyphonic pitch correction

reTune can shape up the tuning of a single instrument or vocal recording. It can change the key altogether and it can even do it on polyphonic recordings or full tracks! reTune can detect the key of the music you feed through the plugin. With the key detected you can decide on another key for output and reTune will transpose and shift tones to match the desired key. You can manually set the mapping for each note if desired. Map all notes to G#? You got it!

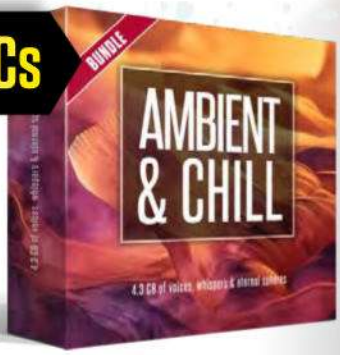
Check it out

19

ZamplerSounds * Patches for Zampler & MPCs

327 Voices, Whispers & Eternal Spheres in Four Expansion Packs for Ambient and Chillout Production. The expansions can be used with the free Zampler//RX Workstation, or with the MPC formats MPC One, X, Live, Live mkII, Force, Touch, Renaissance, MPC Beats, and Software. Order and choose your preferred format above and start producing your next banger!.

66 % on Ambient & Chill bundle with code ADVENTAMBIENT



I love all the included packs, but my secret favourite is „Traveller“ with 95 ethnic & hypnotic patches, mainly for Trap & Chillout – and especially Japanese Trap and Samurai Beats, which I love for listening. These sounds make also a perfect addition for producing my Hypnotic Techno tunes, because they’re pretty unique and you won’t find them anywhere else. «

Check it out

20

66 % on Hyper Vox with code ADVENTHYPER

ZamplerSounds * Patches for Zampler & MPCs

When it comes to vocals, there's polished audio recordings, adlib samples, glitchy voices and all the usual stuff you'll find everywhere. But what about a sample pack that's different – truly unique and likewise deeply inspiring? Then let us introduce Hyper Vox! This 2.1 GB heavy-weight pack comes with 55 breathing basses, screaming synths and enchanting pads – all of them including vocal loops, unheard phrases and Asian vowels. Enjoy!

Check it out

21

83 % saved with QR Code

Flame Sound * Cinematic Bundle

Cinematic Bundle is a massive 10+ GB collection of four cinematic sound packs: Get over 1,500 cinematic booms, impacts, whooshes, bass drops, tension builders, drones, and other sound effects to make your next project sound like a Hollywood blockbuster. Plus cutting-edge sound effects for trailers, game development, music production, and social media, as well as 1,135 individual drum samples, with up to 10 round-robin variations per drum hit.

Check it out

22

Giveaway worth 179 €

u-he * plug-in of choice

There's many plugin developers but not many have the outstanding reputation of the team around Urs Heckmann. All u-he instruments and effects deliver impressive sound quality, highly usable presets, as well as a tremendous flexibility when it comes to sound design. Win one of their plug-ins of your choice!

Where Diva inspires the analog fraction and Zebra 2 has become indispensable in film music, u-he Hive 2 is a competitor of Serum and Vital, because the wavetable synth brings you sounds for EDM, Trap and Pop with a workflow for fast results. Typically for u-he, there are also some exciting features under the hood. Therefore maybe your first choice? «

Check it out

23

Giveaway worth 565 €

ASM * Hydrasynth Explorer

Don't let the compact format fool you: Thanks to its battery operation, the mobile Explorer sounds as excellent, independent and flexible as the large Hydrasynths. Despite the absence of a few controls, the complex possibilities of digital synthesis can be operated easily and directly, even without looking at the manual. This combination enables very expressive playing and provides sound results that are hardly possible with any other synthesizer.

Check it out

24

Giveaway worth 659 €

elysia * mpressor-500 module

mpressor 500 carries the heritage of the fantastic mpressor rack into the 500 module format. Like its big brother, the mpressor 500 combines enormous punch with a full and detailed Class A sound. Its outstanding sound quality and flexibility make it an excellent choice for recording and mixing, while its many special features create amazing dynamic effects far beyond the reach of normal compressors.

Check it out

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Monthly music treasures

by Sascha Blach

Alex Stolze: Raash ve Ruach (רעש וחורו / Noise And Wind)

The German experimental violinist and electro tinkerer, who is also a member of the Pop band Bodi Bill, presents a mix of Neoclassical music, Pop, and Electronica on "Raash ve Ruach." Here, eastern scales and Klezmer melodies meet melancholic violin playing, complex polyrhythms collide with irregular beats, and danceable Techno beats fuse with avant-garde sound experiments featuring analog synths, minimal piano, and the five-stringed violin, the quinton. On the follow-up album to "Kinship Stories" (2020), created again in close collaboration with pianist Ben Osborn in Uckermark, Stolze demonstrates that he is not only an excellent violinist. He also excels at creating instrumental soundscapes that are both new and unusual, yet simultaneously very emotional.

Genre: Neoclassical, Electronica | Label: Neue Meister

Laurent Garnier: Fabric Presents

The French Techno and Rave producer, a pioneer of the Madchester scene, underscores his versatility. In this release - the first of its kind in the new "Fabric Presents" series - he has created four mixes meant to evoke a night in Farringdon. Farringdon is a popular hotspot in London, featuring various clubs. Garnier takes us on an imagined journey through four clubs where House, Techno, Drum And Bass, and Ambient music play. Unsurprisingly, he masterfully handles all these genres, with the Drum And Bass excursion "Into The Low-End" standing out as the intense highlight of the four tracks. The tracks also deserve attention from a production standpoint, as they sonically offer the optimum and serve as a great reference for one's own mixes.

Genre: Electro | Label: Fabric

Prairie & Aint About Me: Pink Warm Belly Of A Dying Sun

With this 5-track EP, the two artists Prairie (Marc Jacobs) and Aint About Me (Lukasz Polowczyk) attempt to merge the art forms of music and lyricism. And they don't just try; they succeed wonderfully. The dark, powerful poems by Lukasz create a suffocating, surreal atmosphere in combination with Marc's music, which flutters between Ambient and Drone. Aside from the intelligent poetry itself, one must commend the style of recitation, as the author captivates listeners with a deep, hypnotic voice and a gesture reminiscent of US Hip-Hop, making one hang on his every word. The sound design also deserves recognition, as reconstructing mentally how these sounds could have been (de)constructed is an intriguing task.

Genre: Spoken Word, Ambient | Label: Adventurous Music

Sofie Royer: Young Girl Forever

Inspired by the book "Preliminary Materials For The Theory Of A Young-Girl" by the French anarchist group Tiqqun, Sofie Royer's album "Young Girl Forever" attempts to portray the challenging life of women artists today. The Vienna-based musician and singer predominantly uses synthesizers, which give the music strong '80s vibes, while her main instruments - violin, piano, and guitars - also play a role. Drawing inspiration from French Touch and Electroclash, Royer creates a kind of intellectual Electro-Pop that shifts from English to German in tracks like "Nichts Neues im Westen" and "Fassbinder," sounding reminiscent of the Neue Deutsche Welle. Interesting music that is by no means only for "young girls," but for anyone who appreciates sophisticated and somewhat quirky Electro-Pop.

Genre: Electro Pop | Label: Stones Throw Records

i Häxa: i Häxa

The debut album by i Häxa is a mysterious concept work that connects ancient myths with cutting-edge technology. Behind it are singer Rebecca Need-Menear (Anavae) and producer Peter Miles (Architects, Dodie, Fizz). The album of the London duo consists of four parts and explores human existence and the dichotomy between logic and chaos. It unites organic Alt-Folk storytelling with harsh Industrial electronics and a dreamlike, ghostly atmosphere reminiscent of the pioneering era of British Trip-Hop. Artists like Björk, Fever Ray, and Emma Ruth Rundle share similar creative approaches and have undoubtedly influenced i Häxa's experimental soundscape. Spanning gentle piano ballads, Folk, Dark Ambient, orchestral arrangements, Drum And Bass, and Industrial, the 16 tracks cover a broad spectrum and thrive on Rebecca Need-Menear's hypnotic, poignant voice. Moving and profound.

Genre: Folk, Industrial | Label: Pelagic

Orchestra Incandescent & Sylvaine Hélary: Rare Birds

Those looking for sophisticated music that doesn't quite fit into any genre might enjoy this album. Sylvaine Hélary is a French flutist and jazz musician. On her new album, created in collaboration with Orchestra Incandescent, she blends baroque instruments and electronica into a musically exciting mélange, which is lyrically intertwined with poems by Emily Dickinson and PJ Harvey. She has brought together nine musicians in the orchestra, who constantly explore genre boundaries. Somewhere between Jazz, Fusion, Folk, and Avant-garde, the eight tracks also incorporate elements of Chamber Music and Pop. Much of it feels freely improvised, airy, and light, yet still challenging for the ear. So, "Rare Birds," indeed.

Genre: Jazz, Electronica | Label: Yolk Records

Soap&Skin: TORSO

If one didn't know better, one might assume this is a regular new album from Anja Plaschg, the creative mind behind Soap&Skin. However, despite sounding quintessentially like the Austrian artist's music, it is actually a cover album. Using voice, piano, French horn, trombone, and various electronics, Plaschg transforms tracks like "Mystery Of Love" (Sufjan Stevens), "Johnsburg, Illinois" (Tom Waits), "Girl Loves Me" (David Bowie), or "Pale Blue Eyes" (The Velvet Underground) into melancholic, serene longing songs that often bear little resemblance to the originals. These are not necessarily the big hits from the respective artists, but rather pieces that might be considered "second-tier." A bit out of the ordinary are the already familiar "Voyage Voyage" (Desireless) and the quirky version of "What's Up?" (4 Non Blondes). The album concludes with "The End" by The Doors, ending not only aptly by title but also emotionally striking.

Genre: Singer/Songwriter | Label: PIAS

Storm Corrosion: Storm Corrosion

Storm Corrosion is a collaborative project between Mikael Åkerfeldt (Opeth) and Steven Wilson (Porcupine Tree). The first and so far only album is the self-titled debut from 2012. The six partially lengthy pieces were recorded in Wilson's No Man's Land Studio in Hertfordshire, England, and present a mix of Ambient, Psychedelic, and Prog Rock, with most parts lacking drums. The tracks have a dark, orchestral quality and a nearly stoic calm. One might wonder why this review appears in 2024. Well, Steven Wilson has remixed the album for a re-release in Dolby Atmos, extracting even more depth from the songs and making them more vivid. To hear this version, one must opt for the Blu-ray, which includes additional extras like the bonus live track "Drag Ropes" and a high-resolution stereo mix at 96 kHz and 24 bit. Perfect food for audiophiles!

Genre: Ambient, Prog Rock | Label: kScope

Your event planner for 2025

23.01.2025 - 25.01.2025
NAMM Show
Anaheim, US

08.04.2025 - 11.04.2025
Prolight + Sound 2025
Frankfurt, DE

11.04.2025 - 13.04.2025
Synthfest France
Orvault, FR

08.05.2025 - 10.05.2025
Superbooth 2025
Berlin, DE

14.05.2025 - 18.05.2025
Berlin Dance Music Event
Berlin, DE

18.05.2025 - 18.05.2025
High End 2025
Munich, DE

23.07.2025 - 23.07.2025
Amazon Prime Day
Worldwide

08.09.2025 - 10.09.2025
AES Europe
London, UK

12.09.2025 - 15.09.2025
IBC2025
Amsterdam, NL

26.09.2025 - 28.09.2025
Guitar Summit
Mannheim, DE

04.10.2025 - 04.10.2025
SynthFest UK
Sheffield, UK

22.10.2025 - 26.10.2025
Amsterdam Dance Event
Amsterdam, NL

Beat 02 | 2025
available Jan 3rd, 2024

Photo: mellamojulian | instagram.com/mellamojulian/

Feature: Techno Masterclass

Whether Melodic, Hard or Hypnotic – Techno reinvents itself in a reliable rhythm, but the essence remains: "The beat has to go on and on". That's why it's here now, the answer to all your production questions! From choosing the right kick to clever synth layering and the latest trends in sound design – we'll show you step by step how to build rumbles, create hissing hats and find melodies that stay. Techno with hit potential!

Test: Elektron Digitone mkII

After the sample-based Digitakt has already been given a complete overhaul, version 2 of the Digitone synthesizer is now unsurprisingly following. Virtually unchanged on the outside, Digitone II now offers 16 tracks for internal sound generation or external gear. Four machines cover specialized forms of FM synthesis as well as subtractive synthesis. FM drums, basses and polyphonic synth tracks can be mixed, combined with the flexible electron sequencer extended to 8 bars, this promises a lot of groovbox fun!

Interview: i Häxa

The mysterious British project i Häxa recently surprised us with their self-titled debut, which combines Electronica, Trip-Hop and harsh Industrial with soft Folklore and a surreal atmosphere. An interesting fusion of ancient mysticism and cutting-edge technology, which we will explore in the next issue.

Photo: Gingerdope

Test: Behringer Syncussion SY-1

Syncussion is an analog two-channel drum synthesizer developed by drum manufacturer Pearl in 1979 to complement acoustic drum sets. In the course of the emerging techno wave in the 90s, the characteristic sounds were also often used for hard basses and dry percussion, which earned the Syncussion cult status and still ensures high second-hand prices today. We have tested for you whether the affordable Behringer replica is an alternative to the rare original.

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Beat

Publisher (V.i.S.d.P.):
Kassian Alexander Goukassian (kg@falkemedia.de)

Chief editor: Marco Scherer (m.scherer@falkemedia.de)

Managing editor: Mario Schumacher (ms@beat.de)

Editors:
Jan Wilking, Carl-Philipp Schmeller, Sascha Blach, Tobias Fischer

Editorial staff:
Daniel Bock, Laura Emiliano, Stefan Hofmann, Matthew Mann, Ruben Mantel, Paul Marx, Dr. Chelsea Bruno, Julian Schmauch, Frank Schreiber, Maya C. Sternel, Vera Schumacher, Christoph Strauß, Nina Falk, Philipp Matthes, Tom Nio, Maveric

Editorial enquiries/Reader letters: redaktion@beat.de

Cover design & layout: Ricarda Becker, naujoks-design.de

Publisher:
Falkemedia GmbH & Co. KG
Pahlblöken 15-17
D-24232 Schönkirchen
Tel. +49 (431) 200 766-0 info@falkemedia.de
Fax +49 (431) 200 766-50 www.falkemedia.de
ISSN 1860-9988
HRA 8785 Amtsgericht Kiel
PhG: Falkemedia Lifestyle GmbH (HRB 12311 AG Kiel)
Managing Director: Kassian Alexander Goukassian

Editorial office:
See publisher's address • Tel. +49 (431) 200 766-766

Data protection officer: Jürgen Koch
see Publishing House Address •
Mail: datenschutzanfrage@falkemedia.de

Subscription Support:
falkemedia GmbH & Co. KG
Pahlblöken 15-17
24232 Schönkirchen
Germany
Phone: +49 (431) 200 766-0
info@falkemedia.de

Media Consulting:
Dagmar Pawlowsky (d.pawlowsky@falkemedia.de)
Phone: +49 (0151) 22 35 58 43

Advertising Rates see Media Data 2024 under:
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Production and Print Management:
impress GmbH, Monforts Quartier 32
41238 Mönchengladbach

Sales Management:
Hans Wies,
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e-mail: hans.wies@verlagsunion.de

Distribution:
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Annual Subscription:	Euro 89.80
Foreign countries	per issue plus 0.90 €.

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